

PULP & PAPER

"The Cellulose Age" EDITORIALS

Stability of This Industry

It may come as a bit of a shock to some Wall Streeters and economists, whose ideas about the pulp and paper industry haven't changed much since the so-called pre-war "newsprint crash," to learn that a new Alaska industry is now based upon a 54-year contract which guarantees the investors not only a continuously adequate timber supply but a competitive price for wood delivered to the mill (story on page 34).

We find that there are still some highly-placed students of our industries and national economy who haven't yet awakened to remarkable stability and long-term planning that characterizes at least the larger units of the modern pulp and paper industry (for some thoughts about smaller mills see interview with Mr. McSweeney on page 33).

How many other industries are based on a 54-year contract—a contract that will no doubt out-live every man who signed the contract and probably most of the individuals involved as investors, employees and customers in the project—whose incomes and jobs thus will be assured for them and probably their children,

Importance of Paper Industry

Some statistics on the use of box cars by the U. S. paper industry indicate in another way just how important this industry is to the national economy.

It would require roughly 815,000 standard box cars, carrying 27 tons per car, to load an annual United States production of 22 million tons of paper and paperboard. This is compared with the total number of box cars (728,408) in service in the United States in 1946.

In other words, it would take all the box cars of the entire railroad system of the United States operating 1 1/10 days, to move the annual production of paper and paperboard. The product of the paper and paperboard industry, if loaded in standard box cars, would make a train 6,600 miles long. The above takes no account of the incoming freight which averages about five times the tonnage of outgoing freight.

Paper Beer Bottles Proposed

A logging manager has made this suggestion to one of our editors: "Let's have paper beer bottles."

His reason is that while driving along a main U. S. highway, he ran into a flock of broken beer bottles, apparently thrown out of a car. They cut two brand new tires of his to pieces, and could have been disastrous to his life.

Glass beer bottles have long been a menace to life and limb not only on many highways, but on beaches, in parks and many other public places. It would be a public service if suitable paper beer bottles could be produced.

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Who Keeps Your Job Safe?

One of Textile Industry's editors picked up the following memorandum from Public Utilities Safety. Every one of our readers will probably want to know just who does keep his job safe, so here is the lowdown:

"Balance sheet (certified) year ending Sept. 30, 1947:

Population of U. S.	135,000,000
People 65 years or older	37,000,000

Balance left to keep your job safe	98,000,000
People 21 years or younger	56,500,000

Balance left to keep your job safe	41,500,000
People working for government	24,500,000

Balance left to keep your job safe	17,000,000
People in the armed services	2,000,000

Balance left to keep your job safe	15,000,000
People in state and city offices	14,800,000

Balance left to keep your job safe	200,000
People in hospitals and insane asylums	126,000

Balance left to keep your job safe	74,000
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Bums and others who won't work	12,000
Persons in jail	11,998

"Two? ? ? You and I! !! And you'd better get a wiggle on because I'm pretty darn busy keeping my own job safe."

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See Page 32 for a Description of This Month's Cover Picture

Plans for Canadian Meeting at Harrison Hot Springs

For the first time in its history, a section of the Canadian Pulp and Paper Association will be holding a convention in the Far West this month.

It will be the Technical Section's annual summer meeting, holding forth in the Vancouver Hotel, Vancouver, B. C., from Sept. 8 to 10, with tours to follow to some of the new and modernized pulp and paper mills of British Columbia.

Sections of a special train were leaving Toronto and Montreal on the evening of Sept. 3, consolidating at Sudbury, Ont., the next morning and proceeding west as the second section of Canadian Pacific's train No. 3, arriving at Vancouver at 8:45 a.m., Sept. 8.

A diversified program of technical papers and group discussions has been planned.

The sessions were to be held at Harrison Hot Springs (B.C.) Hotel, Sept. 8, 9 and 10.

But the resort could not take care of the large number of reservations requested so the place has been changed to the Vancouver Hotel in Vancouver, B. C.

Recent Changes in Personnel

At Atenquique Mill

As reported in a recent issue of **PULP & PAPER**, Stanley A. Wilkes, one of six brothers, who are prominent in pulp and paper mills in various regions of the continent, has succeeded to the position of mill manager at the Compania Industrial de Atenquique kraft mill in Jalisco province in Mexico.

William Bryant has been promoted from assistant superintendent to paper mill superintendent, the position formerly held by Mr. Wilkes. John L. Turner has been made night superintendent. He was tour boss. J. H. O'Connell of Washington, D. C., is technical advisor.

Production of .016 board has been increased from 90 tons to 120 tons a day and .009 liner has been increased about 25% to 140 tons.



NOEL E. KEELER (left) has been elected Vice President in charge of Finance and Accounting for Marathon Corp., according to D. C. Everest, president. Mr. Keeler goes to Marathon from Sylvania Electric Products, Inc. He is a director of the Controllers Institute of America and a graduate of New York University.

ALAN B. HEFFRICH (right) has been appointed General Sales Manager of the Printing, Publication & Converting Paper Division of St. Regis Sales Corp. Into his former position as Eastern Sales Manager has stepped William H. Donaldson, Jr., who previously was with the Mattagami Pulp & Paper Co. of Smooth Falls, Ont., and for two years with Perkins Goodwin Co.

OUR COVER PICTURE

"Evolution of Wisconsin's Paper Industry"



The original painting, reproduced in the photograph shown on our cover this month (smaller reproduction above), has been taken on a state-wide tour of Wisconsin and shown to the people of that state to acquaint them with one of their great industries. The tour is part of the Wisconsin Centennial celebration.

The original will hang permanently in the Neville Public Museum in Green Bay, Wis. A copy of the painting is hanging in the Kimberly-Clark Corp. reception hall at Neenah, Wis.

Chris Borggren, a native of Aarhus, Denmark, who studied under famous painters of Europe before migrating to the United States as a young man in 1922, is the creator of this picture. He is a member of Kimberly-Clark's staff engineering department at Neenah, Wis. Mr. Borggren lives at 59 Bellaire Court, Appleton, Wis.

No doubt some of our readers who are familiar with the Kimberly-Clark mills will recognize portions of this picture.

"But the entire composition was created from my visits and observations at various Kimberly-Clark mills and is not one particular mill," explained Mr. Borggren.

In other words, the picture is a fusion of the buildings erected over a period of 75 years by Kimberly-Clark and, therefore, depicts the evolution of the Wisconsin industry. It will be noted that some buildings are old, others not so old and those at the right represent the very latest architectural design.

Not only the mill buildings, but the wood lands and the water power and water supply which made possible the Wisconsin industry are represented.

Mr. Borggren completed his picture just last May. He received an A. B. degree in architecture and fine art in Denmark. He has traveled and painted in many countries and has won many awards.

COMING INDUSTRY MEETINGS

Pacific Coast TAPPI Lignin Seminars—U. of Wash., Seattle	Aug. 30-31
Multnomah Hotel, Portland, Ore.,	Sept. 2-3
TAPPI Plastics Conference—Institute of Paper Chemistry, Appleton, Wis.	Aug. 16-17
TAPPI Fundamental Research—On "Physical Constituents of Wood," Madison, Wis.	Aug. 18-20
Technical Section Canadian Assn.—Vancouver Hotel, Vancouver, B.C.	Sept. 8-9-10
American Chemical Society's National Convention (Lignin and Wood Products Symposiums) — Portland, Ore.	Sept. 13-16
Northeastern Wood Utilization Council—Boston	Sept. 17
Superintendents' Ass'n. Convention —Lake Placid, N.Y.	Sept. 23-25
TAPPI (U. S.) and Canadian Tech. Section, Mechanical Pulping—Po-land Springs, Maine....	Sept. 27-29
Pacific Coast TAPPI (Engineering) Leopold Hotel, Bellingham, Wash.	Sept. 28
Penn. - N.J. - Dela. Supts' Ass'n.—Ambassador Hotel, Atlantic City,	Oct. 1-2
New England Materials Handling Exposition—Mechanics Hall, Bos-ton	Oct. 5-7
Second Annual Southern Forest Festival—Valdosta, Ga.	Oct. 5-7
TAPPI Testing Conference—Mellon Institute, Pittsburgh, Pa.	Oct. 11-13
Pkg. Machinery Mfg'rs Institute—(16th Annual Meet) — Hotel Roosevelt, N.Y.	Oct. 12-13
Southern and Southeastern Supts. Divisions Joint Meeting—Atlanta Biltmore Hotel, Atlanta, Ga.	Oct. 21-23
TAPPI Engineering Conference—Statler Hotel, Buffalo, N. Y.	Oct. 25-28
National Paper Trade Assn.—Hotel Stevens, Chicago.	Oct. 28-30
Forest Products Research Society, Pacific Northwest Section—Hotel Vancouver, Vancouver, B. C.	Nov. 8-9
Pacific Coast TAPPI—(Slime Control)—Camas, Wash.	Nov. 16
American Paper & Pulp Assn.—Waldorf-Astoria, New York	Feb. 20-24, 1949
National TAPPI Convention—Commodore Hotel, New York	Feb. 21-24, 1949
National TAPPI Coating Convention—Grand Rapids, Mich.	Apr. 26-28, 1949
National TAPPI Fall Meeting—Multnomah Hotel, Portland, Ore.	Sept. 12-16, 1949
Paper Industry Salesmen—Midston House, New York City—Every Monday, 12 noon to 2 p.m.	
Allied Industries Luncheon Club—Second Monday of month, 12 noon, Commodore Hotel, New York.	

Future of Small Mills

A 4-POINT MANAGEMENT PROGRAM

What appears to be a definite shift from a sellers' to a buyers' market in the pulp and paper industry led staff members of **PULP & PAPER** to consider the problem in terms of management, and this led them to an interview with Edward McSweeney, treasurer of the Perkins-Goodwin Co., 30 Rockefeller Plaza, New York. For 15 years prior to his present position he headed his own firm of management consultant specializing in the graphic arts field.

The question posed was: "Is the industry destined this time to shake itself out of the 'feast and famine' cycle which has characterized it through past booms and depressions?"

Mr. McSweeney, speaking—he emphasized—as a management consultant rather than an "expert" in this specific industry, believed emphatically that there was no necessity this time for the industry to repeat history.

"But an avoidance of a repetition of history will call for a vigorous adoption of modern management methods in the fields of production engineering, financing, and marketing," he said. "The smaller and medium-sized companies which make up the bulk of the industry will have to adopt methods which have saved their comparable 'opposite numbers' in other industries."

Mr. McSweeney, in reply to the question as to what steps these mills should take, replied that the steps would vary according to the condition of the mill and its products. "But," he said, "the motivation will be the same in every instance: To make and hold a place for itself despite changing conditions." He pointed out that several smaller mills have already taken such steps.

"Also," he said, "the 'giants' in the industry have, it seems to me, taken adequate hedges against declining demand and diminishing prices. They have attempted this through integration, research, product development, until they would seem to have a solid foothold all the way from timber to ultimate consumer."

Likened to One-Crop Farmers

He contrasted such an organization—growing wood, manufacturing pulp, and converting it to multiple end-use products—with the type of smaller mill which has been inclined to stake all chance on one type of paper or paper specialty. "If in their narrow range of products prices rise, they profit," Mr. McSweeney told **PULP & PAPER**. "If not, they nose-dive, as in the Thirties. They are hardly better off than the one-crop farmers of the Old South."

But they were assisted, Mr. McSweeney pointed out, by the fact that they could expand or contract operations, even to extended shutdowns, for periods matching the color of the business cycle. "That is



EDWARD McSWEENEY, who emphasized he speaks only as a management counsel not as pulp and paper expert in this interview.

no longer possible, and will never be possible again," he said.

Income taxes, both individual and corporation, take too big a bite out of the sales dollar, and break-even points soar with increased volume, so that it is impossible to carry "enough fat for the lean years." Mr. McSweeney also invited attention to the virtual disappearance of family ownership in the industry, to shares more widely held.

"The alternative?" Mr. McSweeney said. "For the average company, it is to resurvey their entire operation, not merely plants, personnel and equipment—but also markets, products, and financing. Then on the basis of this resurvey, the mill should plan ahead for profitable activity on as wide a basis as possible. And this should begin now—not when and if the business tide begins to slacken."

A Four-Way Survey Proposed

At the specific points in such a re-survey, Mr. McSweeney cited four as of basic importance: Market Analysis, Engineering, Financing, and Management Organization. All are of equal importance, he said, and must be coordinated into the general plan for the future of any given mill.

However, the Perkins-Goodwin official had something specific to say about each of the four points, as follows:

Market analysis: One of the functions of the market analyst or economist is to weigh such factors as are visible or may be predicted and gauge their impact on the individual manufacturer's operation. He must also consider possible changes in the nature of demand as expressed in consumer preferences, Mr. McSweeney advised. And, he said, "the methods of distribution should be weighed and analyzed, for the whole pattern of paper sales has, as we know, undergone sweeping changes during the postwar period. Some mills already risk being caught without a sales organization or even a sales policy."

Engineering: Mr. McSweeney made plain that important changes in plant and equipment are necessary in most mills to the future plan. He declared that mechanization and modernization in the paper industry have not kept pace with that of other industries, but he saw hope in the

fact that the Engineer has in recent years taken an advance step in the ranks of industry personnel. In this connection he pointed to the growth of engineer programs and membership in the technical organizations, a direct result of industry awareness that engineering is important—in fact, vital to survival of many mills.

Financing: Access to new capital will, of course, be a "must" during the next few years, the former management consultant stated. "Both long-term and short-term financing will be called for," he said, "and new equipment will cost a great deal more than in the past. Surprisingly few industries have kept their long-term capital expenditure budgets up where they should be in the light of rising construction and capital costs.

Management organization: Finally, Mr. McSweeney believes, there will have to be a general tightening up of the management structure in many units, in both large and small mills. "Good times," he said, "tend to cover up deficiencies in organizational set-ups. Some of these deficiencies can be overcome through employment of consultants, but the ultimate reliance will be on the recruitment of full-time personnel. The modern version of selling agent—maintaining services pertaining to market analysis, financing, and production guidance in cooperation with leading pulp and paper engineers—can very well be an answer to these problems, and can be a stabilizing influence for the whole industry. The only alternative to these possibilities would be a pooling of management 'know-how' on the part of a number of small mills, perhaps using outside services and specialists to supplement the staff. The voluntary chain store is an example of this latter possibility. The installation of incentive plans should also be considered."

"I do not consider myself enough of an expert in the industry to suggest specific methods," Mr. McSweeney concluded, "but I am convinced of the fact that the application of sound, scientific management principles will enable it to overcome the obstacles that have hindered it in the past and will loom in the not distant future. And we have all observed already favorable results by mills which have taken the step."

Now It's Name Is Publishers' Paper Co.

The name of the Hawley Pulp & Paper Co. has now been changed officially to Publishers' Paper Co. of Oregon City, Ore. Sale of this mill to a Pacific Coast newspaper group was previously reported. On Aug. 1 the old company was liquidated.

Norman Chandler, publisher of the Los Angeles Times, is president. Carl E. Braun continues as vice president and mill manager.

TO BLEACH IN ALASKA

KRUG PLEDGES MILL SUPPORT

If no unforeseen hindrances develop—and Secretary of Interior Krug has said he will do his best to circumvent any—construction work will begin next spring on the first pulp mill ever built in Alaska.

According to present plans, the mill will have an initial capacity of 300 tons daily of high alpha sulfite pulp, 100% bleached. A 6-digester pulp mill and bleach plant are to be built at Ward's Cove, six miles by motor highway north of Ketchikan, Alaska, on Revillagigedo Island.

At least present plans call for bleaching in Alaska, although serious thought has been given to having the bleach plant in east or west U. S.

The ink was hardly dry on the 54-year contract signed by the U. S. Forest Service and the new Ketchikan Pulp & Paper Co. of Seattle, for 1½ billion cu. ft. of timber for this mill, when Secretary Krug sent a personal telegram of congratulations to the company.

In that telegram Mr. Krug promised to do all in his power to help this mill reach "full production."

The Indians, fisheries, mining and territorial governments—in fact, everything short of a war which might conceivably upset the applecart as far as this mill is concerned—are all under the administration of Secretary Krug. This would seem to imply great significance to his enthusiasm.

LAWSON TURCOTTE, of Bellingham, Wash., is President of Ketchikan Pulp & Paper Co., which plans mill at Ward's Cove, Alaska. He is President of the Pacific Coast Association of Pulp & Paper Mfrs. and Executive Vice President of Puget Sound Pulp & Timber Co.



FRED G. STEVENOT, of San Francisco, who is Chairman of the Board of Ketchikan Pulp & Timber Co. He is also President of Puget Sound Pulp & Timber Co.

astic telegram with its unreserved pledge of full cooperation.

Other Mills Proposed

Secretary Krug now predicts that other pulpwood units previously offered for sale in Alaska by the Forest Service will soon be sold. Within a week after the Ketchikan Pulp & Paper Co.'s bid was accepted, announcement was made of tentative plans for new mills near Sitka and Juneau.

Alaska Industrial Corp., incorporated in Juneau, has been organized and its officers plan to bid for the Sitka pulptimber unit already set aside by the Forest Service. This company contemplates a 200-ton dissolving pulp mill and has investors in Sitka and the east but principal capital would come from companies interested in the product.

Henry F. Cheney, president of the Coos Bay Lumber Co. at Coos Bay, Ore., and also of the Juneau Spruce Corp., an Alaska lumber company, said he and his associates will consider bidding for the Juneau pulptimber unit.

American Viscose Backs Mill

American Viscose Corp., one of the pioneers and biggest producers in the rayon industry, has arranged to take all the pulp from the Ketchikan mill. In fact, American Viscose is the major financial backer for the new mill.

American Viscose has eight rayon plants—at Marcus Hook, Pa., where the U. S. rayon industry was born, Meadville, Pa., Front Royal, Va., Lewistown, Pa., Nitro,

W. Va., Parkersburg, W. Va., Roanoke, Va., and Fredericksburg, Va., and is parent firm of Sylvania Co., manufacturers of cellophane, purchased by American Viscose in 1946. Dr. Frank H. Reichel is president of American Viscose.

Officers and directors of Ketchikan Pulp & Paper Co. include Fred G. Stevenot, of San Francisco, chairman of the board; Lawson P. Turcotte, of Bellingham, Wash., president, and Robert H. Evans, of Seattle, vice president and counsel. These men also are officers of Puget Sound Pulp & Timber Co. of Bellingham—Mr. Stevenot not being president, Mr. Turcotte, executive vice president, and Mr. Evans, vice president and counsel of that company.

It is understood that the American Viscose Corp. desires the Puget Sound Pulp & Timber Co. organization, which has already made quite a name for itself in this industry for advanced technical achievements, to take over full responsibility for every phase of the pulp manufacturing.

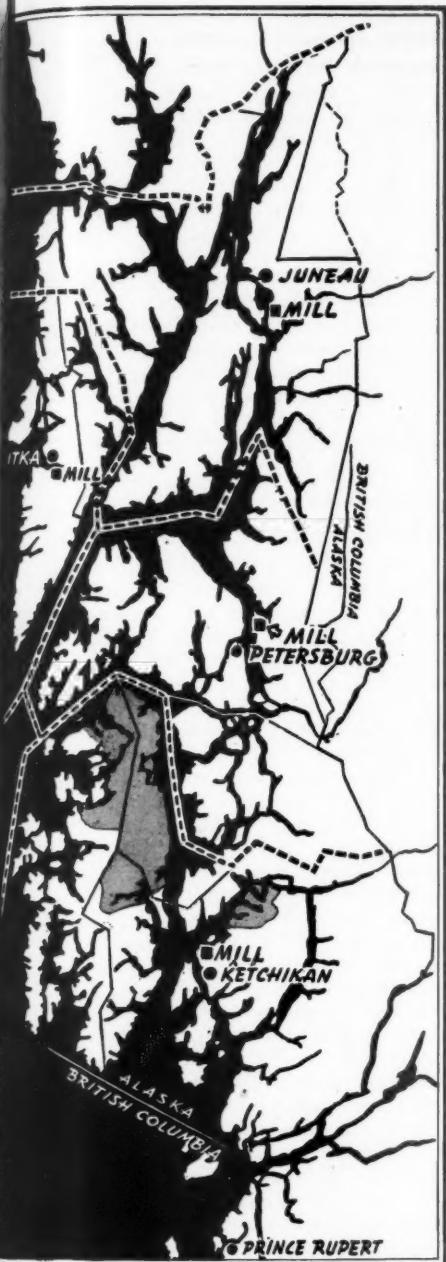
At the Ward's Cove mill and bleach plant there will be permanent, year-around jobs created for over 300 employees, many of whom were previously dependent on seasonal jobs. Some of the key positions would be filled by trained men from the Bellingham organization.

Mr. Cavin Inspects Facilities

Harold D. Cavin, chief engineer of the Puget Sound Pulp & Timber Co. and also chief engineer for the new Ketchikan

HAROLD D. CAVIN, development engineer for some of the most modern pulp and paper operations on the Pacific Coast and in the South who is Chief Engineer of Ketchikan Pulp & Paper Co.





THIS MAP shows the Ketchikan area where new 300-ton pulp mill will be built. Mill will be at Ward's Cove, six miles north of Ketchikan. Dotted line shows area around Ketchikan set aside by Forest Service as a pulpwood unit for this mill. Darkened area is portion now actually set aside for cutting, but more will be supplied if needed. Dotted lines show the timber units that would serve mills near Juneau, Petersburg and Sitka. In this article, it is reported that one company already has been formed to bid for the Sitka site and an existing lumber company is considering bidding for the Juneau unit. The Petersburg unit was considered last year by a newsprint group, since dissolved.

firm has already made preliminary surveys in Alaska. He went back again to Ketchikan in mid-August for several days to check over the water supply. Plenty of water and high purity water is needed for a bleach plant. Conditions for contractors and construction plans were also among his immediate problems.

Erik Ekholm, general superintendent of

Amvisco Is Tremendously Big User of Dissolving Pulp

It is understood the Alaska mill production is to cover future expansion of American Viscose Corp., not current needs. It presently is already one of the biggest users of wood pulp in the world.

In an exclusive statement to PULP & PAPER on August 13th, Mr. Frank H. Griffin, vice president and director of American Viscose Corp., said: "It is expected that the dissolving pulp to be produced by the new Ketchikan mill will be used primarily to meet increased requirements of American Viscose Corp. The future plans of the corporation call for increased production of both its major products: Rayon and cellophane. The construction of the new pulp plant will therefore assure an adequate cellulose supply to cover these plans."

Mr. Griffin added to this statement to an editor of PULP & PAPER by saying, "Avisco will continue to be a large customer of the established wood pulp industry. The projected capacity of the Ketchikan mill will be used, as I say, to help us meet the future expected increase in demand for our products."

Avisco is a tremendously big user of pulp, producing 400 million pounds annually of rayon, using mostly wood pulp, but also some cotton linters pulp.

In all probability, Avisco will employ a firm of engineers to advise with Puget Sound Pulp & Timber Co. engineers on design and construction of the new mill in Alaska.

Puget Sound Pulp & Timber Co., and Carl Sahlin, the logging manager, also have made surveys in Alaska.

Mr. Cavin has participated in many important engineering developments in this industry, in construction of Pacific Coast mills and additions and he was engineer in charge of construction of the Hollingsworth & Whitney mill at Mobile, Ala. It probably will require most of the winter months for Mr. Cavin and his staff to complete the engineering for the Alaska mill, and he would not move permanently to Alaska to direct the construction until spring.

It would be almost wild guesswork at this stage to predict the cost of the mill because of the present inflationary period. C. M. Granger, acting chief forester, set very wide limits when he said recently it would cost from \$20,000,000 to \$30,000,000.

A dissolving pulp is required for the viscose or acetate rayon processes, both of which are used by American Viscose Corp. There are many exacting requirements. There is about a 12% shrinkage in dissolving pulp, so the yield is not as great from the wood. This means that a 6-digester plant would be needed for 300 tons.

A Remarkable Contract

One of the most remarkable features of the Alaska project is the unusually long-term contract it involves. The 54-year deal with the Forest Service is one of the most unusual in connection with any forest industries. It indicates the long-term outlook now being taken by pulp and paper industries generally in their financial undertakings.

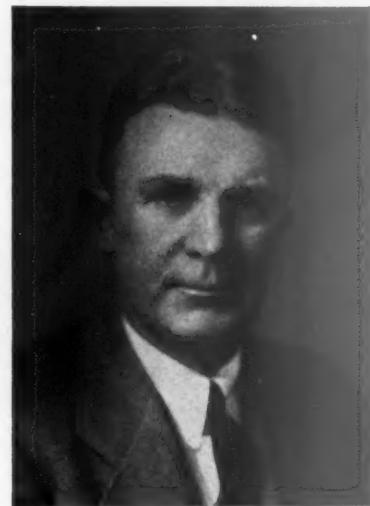
The Ketchikan agreement extends until June 30, 2002—and this, of course, will carry on beyond the lives of most of the directors, employees and customers of this new industry when it starts up.

The Ketchikan Pulp & Paper Co. thus far has invested \$100,000 as earnest money in the timber purchase. It has spent many more thousands in studies and plans.

Power supply must be developed. There are five site possibilities on the island where the mill will be built.

The timber which has been purchased is mostly on the northern half of Prince of Wales Island with a portion on Northwest Revillagagedo Island, near the mill site.

The sale ends many years of effort by



B. FRANK HEINTZELMAN, Alaska Regional Forester, who has seen a life-time dream come true in the sale of the Ketchikan pulp-timber. For many years he has sought to interest experienced private enterprise in Alaska pulp industry.

the Forest Service to sell this timber to a pulp industry, efforts which have become intensified of late, especially because so much of the timber is becoming over-ripe. Frank Heintzelman, Alaska regional forester, has led these efforts, traveling many thousands of miles and interviewing many leaders in an effort to interest investment. This timber is entirely in the Tongass National Forest which is under Forest Service control.

The Forest Service contract guarantees a price for the timber competitive with that obtaining on Puget Sound in the United States. Furthermore, it guarantees timber from other areas if this is not enough to support the mill.

It appears now that any Indian aboriginal timber claims advanced by the Indian village leaders in Alaska and their legal advisers will not affect this pulp company but would be matters to be settled only with the government. A bill was passed in Congress to set in escrow the receipts from timber sales against any possible final legal cash awards to be made to the Indians.

Ultimately the Forest Service contract calls for a mill of 525 tons capacity.

New 450 Ton Georgia Mill LICKS ITS STARTING-UP PROBLEMS



ERNEST ROSSITER, who is President of Southern Paperboard Corp., new 450-ton board mill in Georgia, which had to lick a flood problem in getting started up.



ROLAND WILBUR, Manager of Manufacturing at the new Southern Paperboard Corp. mill at Port Wentworth, Georgia.

When a **PULP & PAPER** staff editor was at Port Wentworth, Georgia, in May it was in a torrential downpour which had lasted for days and the grounds and first floor of the Southern Paperboard Corp., subsidiary of Robert Gair Co., was under water. But when the same staff member made a southeast coast swing last month all the construction delays had been overcome and the big new mill had been in operation since June 15th, according to Ernest Rossiter, president of Southern Paperboard, and Roland Wilbur, manager of manufacturing and active with Mr. Rossiter for many months in the development and construction stages.

The new mill has a capacity of 450 tons of liner board and similar products on the 236-inch Puseyjones machine. It is located seven miles northwest of Savannah connecting with rail and deep water dock. Timber supply was assured as early as 1945 when Gair Woodlands Corp. was organized as wholly owned subsidiary of Southern Paperboard with T. W. Earle as president. This organization purchased about 175,000 acres of timber in North Carolina, South Carolina, Georgia and Florida. The mill will consume in excess of 250,000 cords of pulpwood annually when in full operation, and this will be obtained from both Gair Woodlands Corporation and independent pulpwood producers and farm lots.

Southern Paperboard, as described previously in **PULP & PAPER** has complete facilities for pulping, power, and the recovery of chemicals. The six welded steel digesters have a capacity of ten tons each, and each can deliver into one or the other of two blow tanks, so that two kinds of cooks with separate woods can be made simultaneously. Deliquoring is pro-

vided by two lines of vacuum type washers. The two kinds of stock from the two washed stock storage chests are pumped through independent mix tanks, meters and consistency regulators to the flow box which feeds six centrifugal screens. Refining is by fourteen E. D. Jones Majestic jordans. The fourdrinier kraft liner board machine is rigged for speeds up to 1600 feet per minute. The machine room includes an extension for roll finishing and can be expanded for a second machine. A roll storage building has a capacity of ten thousand tons.

J. E. Sirrine Co. of Greenville, S. C., engineered the job completely under the direction of D. G. Moon, assisted by R. H. Mills as project engineer. J. W. Cantrell was resident engineer.

Kalamazoo Supts. Plan For Coming Year

The program for the coming year of Superintendents dinner meetings at Kalamazoo, Mich., to be held on the third Thursdays of each month at the Harris Hotel, will be under a new group of officers: Herbert B. Johnston, chairman, and plant engineer at Allied Paper Mills; William F. Hathaway of KVP, first vice chairman; William Shaw of Michigan Carton, second vice chairman, and Olin Callighan of Edgar Bros., continues as secretary-treasurer.

The first meeting will be on Sept. 16 at 6:30 p.m.



P. H. GLATFELTER (on the right), President and Treasurer of the P. H. Glatfelter Co., operators of a soda mill and 160-ton book, bond and specialties paper mill at Spring Grove, Pa., is shown here as he received the State of Maryland's first "Tree Farm" certificate from GOV. WILLIAM P. LANE, Jr., of Maryland (left).

The Glatfelter Pulpwood Co., also headed by Mr. Glatfelter, dedicated its 1,278 acre Tree Farm in Charles county, Maryland, on July 30. That state's forest department director, Jas. Kaylor, said there are 2,700,000 acres in Maryland which are better suited to growing trees than any other crop.

Mr. Glatfelter is a Vice President of the American Paper & Pulp Association.

Meder Johnson Leaves Rayonier Incorporated

Meder Johnson, former chief engineer of Rayonier Incorporated, is no longer connected with that company and is currently occupied in building rental housing units in Olympia, Wash. However, this probably will be a temporary interest for him. He lives at 3204 Marengo Road, Olympia.

Mr. Johnson was born in Bellingham, Wash., was graduated from the University of Washington as a mechanical engineer in 1934 and started with Rayonier immediately afterward. He was successively plant engineer and assistant resident manager of the Rayonier mill at Port Angeles before becoming chief engineer of the company.

Dr. Nadelman Leaves I. P. To Head Michigan Course

A curriculum for the new 4-year paper-making course at Western Michigan College in Kalamazoo, first announced in the June issue of **PULP & PAPER**, has been decided upon and Dr. Alfred H. Nadelman, who resigned as technical superintendent, International Paper Co., Niagara Falls, N. Y., takes over as head of the course on Sept. 1.

A native of Germany, naturalized U. S. citizen, he received his Ph.D. cum laude at the University of Berlin in organic chemistry in 1929 and studied further at Maine, Cornell and other U. S. schools. In 1938 he came to the U. S. to take charge of Milprint, Inc., laboratories at Milwaukee, from 1940-44 was with Glasine Paper Co. in Pennsylvania, finally as chief research chemist, and joined I.P. in '44. He has headed a staff of 45 I.P. technicians supervising everything from deinking and bleaching studies to water problems, product development, etc.

The new curriculum follows:

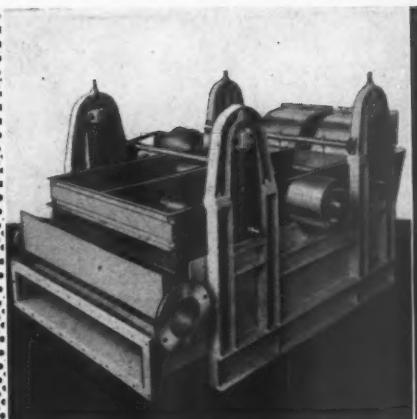
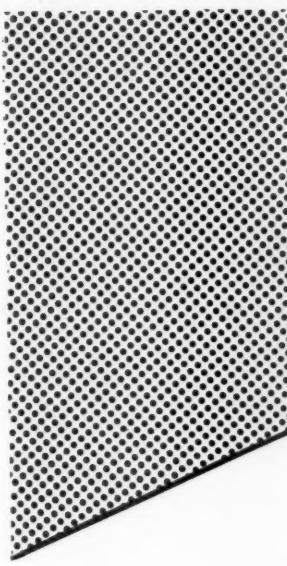
First year: Rhetoric, mathematics, general chemistry, mechanical drawing, orientation to paper technology.

Second year: Language and literature, calculus, mechanics, sound and heat, qualitative and quantitative analysis, pulp technology, paper manufacture.

Third year: Language and literature, organic chemistry, industrial chemistry, sociology, and paper technology, paper manufacture.

Fourth year: Physical chemistry, economics, pulp and paper technology. Included also will be from 20 to 24 semester hours of elective subjects such as German, engineering materials, engineering processing, electronics, electrical measurements, accounting, salesmanship, business law and administration.

Members of an advisory committee are: Max Bardeen, Lee Paper Co.; Dwight Stocker, Michigan Paper Co.; William Kirkpatrick, Allied Paper Mills; Paul Bartholomew, Hawthorne Paper Co.; A. L. Sherwood, Sutherland Paper Co.; Rudolph Germanson, Kalamazoo Vegetable Parchment Co.; Ernest E. Ludwig, Birmingham and Prosser Co., and Dr. Gerald Osborn, head of chemistry, and Dr. Deyo B. Fox, chairman of vocational education, both of the college.



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- ✓ for screening the knuckles, cockle burrs and uncooked fibres from straw stocks
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BIG SWEDE'S BROTHER

Digester in Canada for Rhinelander

An agreement has been made by Great Lakes Paper Co., Fort William, Ont., with Rhinelander Paper Co. of Rhinelander, Wis., for the building of a new sulfite pulp digester at Fort William, with an annual productive capacity of 10,000 tons, according to President Earl Rowe of the Great Lakes organization.

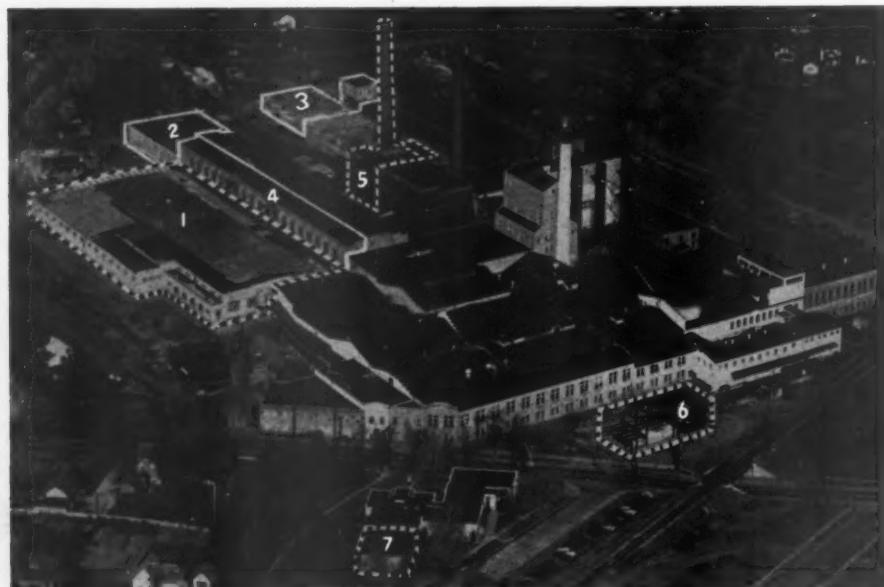
The contract provides for the sale at satisfactory prices for the full output of the unit for 20 years, to Rhinelander, says Mr. Rowe. The full construction costs of this project is being advanced by the Rhinelander interests.

The addition of the new No. 7 glassine paper machine at Rhinelander—a twin brother to the famous "Big Swede" which went into production in 1942—is the principal unit in an expansion program now being completed at the Wisconsin operations. The additional digester at Fort William will help to supply this new machine with pulp.

The new No. 7 glassine Fourdrinier paper machine at Rhinelander Paper Co. was due to start rolling by Sept. 1, according to Folke Becker, president and general manager of that company. As a result this Rhinelander, Wis., industry has the largest glassine operations at one location in the world.

SOME THINGS HAVE BEEN ADDED at Rhinelander Paper Co., as this air view from 1,000 ft. altitude shows. The white numbers show the major units added, as follows:

1. New finishing room—train shed and truck loading docks.
2. New warehouse.
3. Water filtration plant.
4. Location of new No. 7 paper machine.
5. Boiler house addition and new stack.
6. Fodder yeast plant (owned by group of sulfite mills in Wisconsin and Michigan, making yeast from 50% of Rhinelander's effluent).
7. Addition to main office building.



Operations at Rhinelander Paper Co. were suspended Aug. 9 to 15 in order to cut in and hook up added power equipment and other facilities needed for the new machine.

No. 7 has been built by Beloit Iron Works and, together with Rhinelander's 182 inch wide, 110 tons a day "Big Swede" (described in Dec. 1944 **PULP & PAPER**), occupies a modern machine room 365 ft. long.

A contest to name the new machine, temporarily being called the "Big Swede's Brother," was to end Sept. 1. The contestants are advised it could be called the "Big Swede's sister" if a feminine name is chosen. Prizes of \$150, \$100 and \$50 and 50 consolations boxes of aged Wisconsin cheese are offered in the contest for persons outside the mill. Employees are also having their own contest. The name actually chosen may be the top one in either contest or in neither—in case some non-contestant in an equipment company picks it.

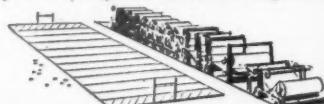
A Cameron rewinder and other auxiliary equipment have been installed. Difusing-light glass block windows and Ross Engineering's economizer ventilating system are features of the modern machine room. Morden Stock Makers and Bird Machine Co. screens are pulp preparation equipment used at this mill.



...help us name him!

THE "BIG SWEDE" is a giant paper machine, named after the boss who was born in Sweden. The Scandinavian paper industry often confers affectionate names upon its machines.

TO THE WORLD of paper and packaging the "Big Swede" is probably the most famous of paper machines. This is partly because it is so enormous (the biggest glassine machine in the world). But also because the rather novel name seemed to endow the machine with a sort of human personality, which caught the public fancy. Finally, the "Swede" was dramatically born into an America just recently plunged into war and in urgent need of the glassine paper this huge machine could produce.



WELL, there is soon to be another blessed event in the Rhinelander family. The "Big Swede's" going to have a twin brother. He's big, too. (A football field couldn't contain the two of them.) By September he will be rolling out enough of those fine Rhinelander greaseproof and glassine papers to meet demand.

SO... WE NEED A NAME. To find one we are running a contest in paper and packaging circles. But everybody's welcome. If you think of a good name for the Big Swede's twin, send it in. You may win a cash prize. Or, if you want further details, drop us a line.

*Could be a sister

THIS IS AN AD WHICH WAS PUBLISHED by Rhinelander Paper Co. in one of the national general circulation magazines. There are really two contests and they were to close on Sept. 1. One contest is among Rhinelander employees; the other among outsiders.

R



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PULP PAPER

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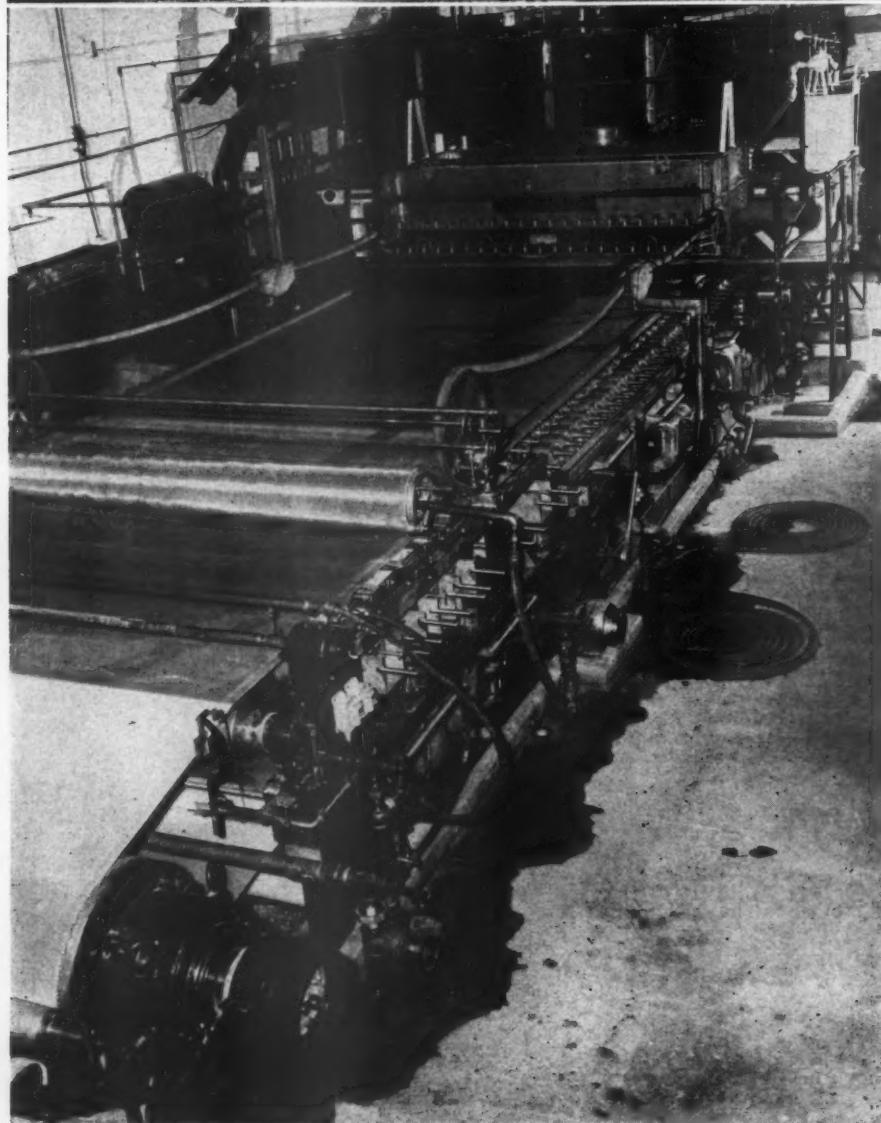
The five main offices and representations of the Buckley-Dunton Organization have one principal aim in common. It is to supply the most suitable product and to find the most advantageous market for the buyers, sellers and exporters of pulp, paper and paper products. The successful achievement of this aim is reflected in the organization's constant growth in size and scope for well over a century.

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DOWN EAST MILL Modernizes

ABOVE IS THE PICTURESQUE MARCUSUS MFG. CO. groundwood mill at Livermore Falls, Plymouth, N. H., which water supply limits to about 200 operating days a year. The company also has groundwood, sulfite pulp and paper mill at Lincoln, N. H. BELOW is completely modernized 120-inch Fourdrinier and flow distributor at the Lincoln mill. Entire wet end was built by Sandy Hill.

Marcalus Mfg. Co., Lincoln, New Hampshire, is one of the most picturesque of the smaller New England mills and, more important, is one of the smaller mills which has taken definite steps toward improvements that will allow it to compete in the modern industry.

Photographs above shows the Marcusus groundwood mill at Livermore Falls and the completely modern 120-inch Fourdrinier and flow distributor at the Lincoln mill.

This mill was originally a part of the Parker Young Co. and the Lincoln properties were recently purchased by N. Marcusus.

The entire wet end of the machine was built at Sandy Hill and installed under the direction of their engineers in charge of Millard Hayes.

J. G. Crump is mill manager at Lincoln; general superintendent is D. J. Walsh, and William Canton is purchasing agent.

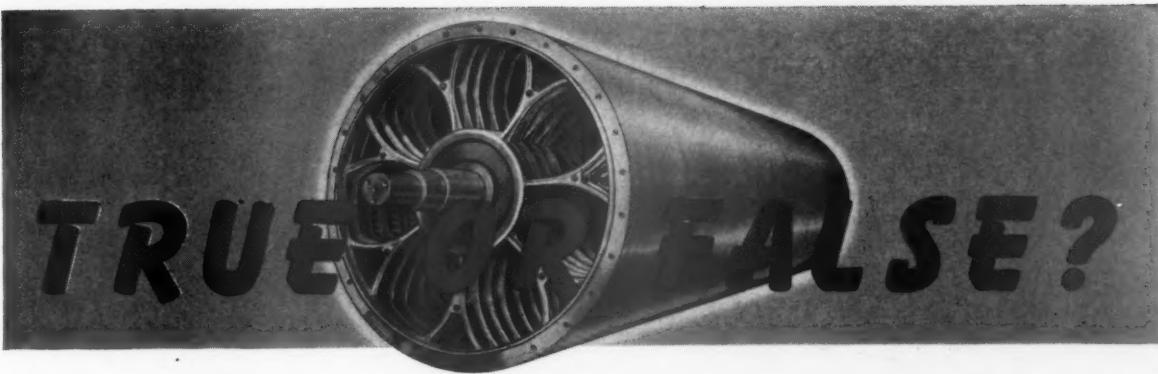
A specialty is wrap for meats. Listed products are sulfite bond and ledger and papeterie. At Lincoln there are three Fourdriniers making 100 tons a day according to this year's official rating.

A 6-grinder groundwood mill and 3-digester sulfite mill and Dilts Hydrapulper are major equipment at Lincoln and, in addition, there is the groundwood mill at Livermore Falls, also in Grafton County. Operations at Livermore Falls, where there are four grinders and four wet machines, is limited to 200 days a year approximately, because of water supply limits.

For the photographs shown here **PULP & PAPER** is indebted to Agnes B. Palmer, the able editor of "Chips," the house organ of Sandy Hill Iron and Brass Works, Hudson Falls, N. Y. Lately she has been getting around with Ed Durling, photographer, to track down the destination of some of her company's equipment.

District 50 Loses

District 50, United Mine Workers, lost its biggest plant in the pulp and paper industry as well as its largest plant in New England recently when employees of Brown Company, Berlin, N. H., voted 2,058 to 298 to be represented by the AFL Brotherhood of Pulp, Sulfite and Paper Mill Workers.



FACTS AND FALLACIES ABOUT CYLINDER MOULDS

- Today the trend is toward greater strength

TRUE Modern cylinder-machine operation — high-speed, continuous — calls for stiffer, stronger cylinder moulds *without great weight increase*. Cheney Bigelow has introduced cylinder improvements which meet today's requirements.

- It never pays to repair cylinders

FALSE In many cases Cheney Bigelow can put your worn cylinders in first class condition, repairing and recovering them at reasonable cost. Our broad cylinder experience enables us to tell quickly when repairs are *not* advisable; in such cases we report our findings promptly and fully.

- There's a new way to increase felt life

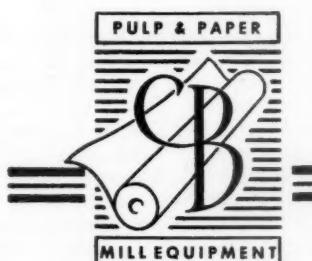
TRUE A new type cylinder seal introduced by Cheney Bigelow increases felt life because it operates at lower friction than the usual felt seal (it's round reinforced neoprene, self-lubricated by water). It eases the pull on the felt, reduces stretch, helps keep the felt open.

- Custom-built cylinders cost you more

FALSE Every Cheney Bigelow cylinder is custom-built, from specifications made up only after all mill conditions are considered. Your product, the freeness and consistency of your stock, drainage speed, speed range, chime ring wear, Ph, and many other factors are *all* important. Beginning with the correct specifications saves you time, trouble, and — in the end — money. That's why Cheney Bigelow *custom-built cylinders actually cost less*.

- Cheney Bigelow is a major producer of cylinder moulds

TRUE Cheney Bigelow has pioneered in the development of many cylinder features which are helping paper mills reduce costs, increase capacity, and manufacture a better product. Cheney Bigelow also manufacturers thickeners, dandys, wire cloth, Fourdrinier wires and other types of paper mill equipment. **CHENEY BIGELOW WIRE WORKS, SPRINGFIELD, MASS.**



Cheney Bigelow

SPRINGFIELD MASSACHUSETTS

Alberta's First Mill

PULP AND BOARD PLANNED

Plans to build a \$9,000,000 pulp and board mill in an entirely new pulpwood area of North America—at the city of Red Deer, Alberta—were outlined to **PULP & PAPER** as this issue went to press by Melvin Hough, who has been a lumberman in Canada for 17 years.

He is now president of the newly formed Alberta Pulp Mills, Ltd., as well as being president of the Melvin Hough Lumber Co., of Rimbev, Alta.

This new mill would be about 500 miles east of the nearest Pacific Coast pulp and paper mills and a much greater distance westward from the nearest Manitoba and Ontario mills, in an area where very little has been known until recently about the extent of the wood resources.

In the first interview he has granted concerning his project Mr. Hough said the pulp mill will use the kraft process and will have a nominal capacity of 175 tons per day. A bleach plant is also planned. Products will be boxboard, bleached board for food and dairy products and unbleached and bleached kraft pulp. He said wood supply would include both spruce and poplar.

Red Deer is about 100 miles north of Calgary and about an equal distance south of Edmonton. The mill site is on Red Deer River in the city limits and construction will be started next spring if all plans are cleared by that time. An 107-acre site is being purchased from the city for \$10,700.

An important step is authorization of a long-term forest utilization program by the Alberta provincial government. Unlike some other provinces, Alberta has had very little data on its forest resources. It was not until a survey had been made for Mr. Hough's company recently, as was reported in this magazine last month, that very much was known of their extent.

The timber survey was made under direction of Cellulose Engineers, Inc., of Seattle, Wash., who have been engaged to prepare all plans and to conduct all negotiations for the new mill.

Herman Simpson, former manager of kraft mills in both the U. S. and Canada, who is vice president of Cellulose Engineers, is handling all negotiations and plans.

Application for Timber

Alberta's Deputy Minister of Lands and Mines J. Harvie informs **PULP & PAPER** that an application of Alberta Pulp Mills for 300,000 acres of crown lands has not yet received final consideration. It is customary for the government to look into all circumstances from the standpoint of available timber, financial setup, and access to water and power. Some time may elapse before this is completed.



MELVIN HOUGH, Dakota-born Alberta timberman who is President of newly organized Alberta Pulp Mills, Ltd., projecting new 175-ton kraft mill for Red Deer, Alta.

Mr. Simpson, however, expressed hope that production of pulp and board may be expected by October, 1950. The plant will have an electric power requirement of 7,500 kw. per hour.

The chosen site was originally held by the E. B. Eddy Co. of Hull, Que., which turned it back to the city after deciding not to go ahead with a match factory venture.

The proposed mill will be west of the town, adjoining the Canadian Pacific Railway trackage. Red Deer River will supply adequate water for power and processing.

The timber grant sought from the Alberta government of over 300,000 acres of crown lands is in the region of Rocky Mountain House, about 62 miles west of Red Deer. The whole tract is thickly forested.

There are two Indian reservations on this area and some arrangement will have to be worked out to deal with them for cutting pulpwood. It is understood the Indians will be encouraged to participate in the operation without having to move from their present homes, or forfeit any of their lands.

Capital for the enterprise is reported to be from Canada and the United States.

In addition to unbleached and bleached board and coarse papers and such as building and saturating felt and car links, the company plans to sell surplus bleached pulp to customers in the United States.

Mr. Hough, who was born in Richland County, North Dakota, in 1893, but moved to Alberta with his parents at the age of two, has recently been touring some of the modern mills in the U. S. with Mr. Simpson.

CELANESE ESTIMATES PULP COSTS

Actual construction of mill buildings for Columbia Cellulose Co., subsidiary of Celanese Corporation of America, which has a \$25,000,000 high grade sulfite pulp development under way near Port Edward, B. C., will start some time in October, according to present plans.

Nearly \$32,000,000 is the estimated capital requirement for the Port Edward 200-ton mill.

Actual plant construction is expected to cost \$25,370,000, according to a prospectus issued by Canadian underwriters of a new bond issue to cover part of the financing. Capital expense for woods operation during the next two years is estimated at \$1,100,000; working capital, \$2,942,500; interest during construction, \$1,750,000; miscellaneous expense, \$500,000; organization cost, \$150,000.

It is planned to have the mill ready for operation by the summer of 1950.

The Canadian investment in the senior securities will be substantial, as indicated by the fact that a \$15,000,000 issue of first mortgage bonds has already been subscribed by Canadian institutions, and a \$5,000,000 issue of general mortgage 5% bonds has been offered for general investment by Wood, Gundy & Co. and Nesbitt, Thomson & Co., Canadian investment houses.

In addition to this financing Celanese Corp. previously subscribed \$12,500,000 for preferred and common issues and has

offered an additional \$7,500,000 if required.

It is estimated in the prospectus that the cost of production per ton of the company's product will be \$103.40.

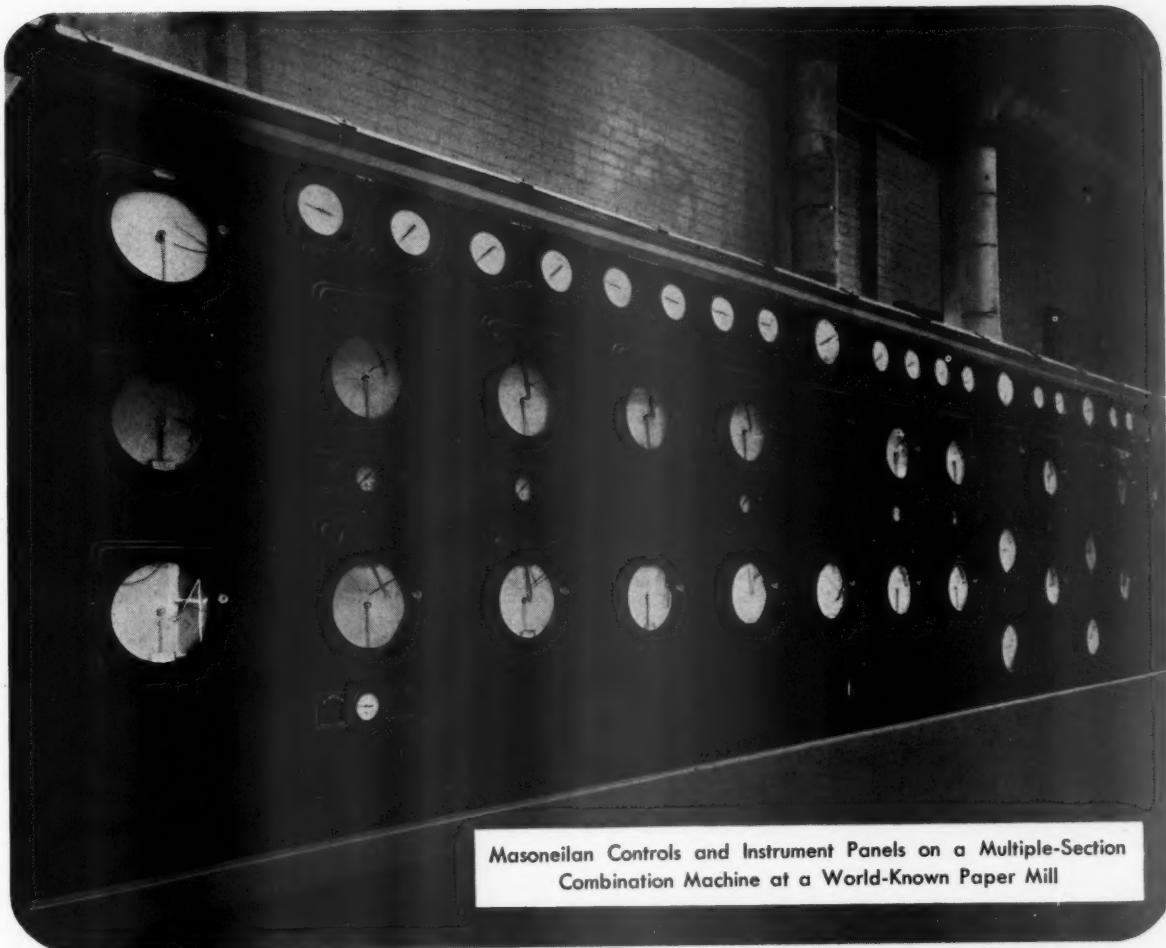
Cost of delivering logs to the mill site has been estimated at about \$25 per thousand board feet for coastal timber and \$22 to \$24 per thousand for the upper Skeena timber.

Estimate of the cost of production per ton of pulp, based on an annual production of 62,000 tons is:

Pulpwood, \$30.19; chemicals and water, \$18.40; power and process steam, \$19.36; maintenance, operating supplies, mill labor and supervision, \$12.23; general administration, salaries and expenses, \$3.06; depreciation, \$1,250,000 a year, \$20.16. Total, \$103.40.

Estimated gross profit is \$3,819,200 a year, after depreciation but before taxes on income and available for payment of bond interest.

S. B. ROBERTS, chief engineer for Celanese Corp. of America, New York, and C. H. KLOTZ, who is to become resident project engineer of Columbia Cellulose Co., visited Port Edward, site of the latter company's cellulose acetate mill which will soon be under construction, in August. Accompanied by GEORGE MARTIN, local superintendent, they made an aerial survey of some of the company's timber holdings in the Skeena area.



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OPPORTUNITIES IN THE FAR EAST

INDIA'S POTENTIALITIES

If paper use in India and China is increased only 5 lbs. per year per person, it would mean additional consumption of 2½ million tons of paper in those two countries. For in those countries are 40% of the world's population.

Before the war, consumption was 8 lbs per person in China and it has been less than one pound per person in India up to the present time—both before and since the war. These figures compare with 350 lbs. per person in the U. S. A. What a sensational opportunity for increased paper use exists in those ancient nations!

The vast sub-continent of India, with one-fifth of the human race within its borders, is making an extensive survey of its resources for papermaking. In China, plans for two kraft mills are being carried forward. The governments of both of these countries have sent a considerable number of students to work in the paper mills of the U. S. and Canada to learn the most modern processes.

According to estimates made recently by the Industrial Planning Department of the new government of India, paper consumption is expected to increase to 355,000 tons by 1952 and 550,000 by the end of 1957 (it was 140,000 in 1945).

The government has set a production target of 264,000 tons by 1952 and 470,000 by 1957 (it was 120,000 tons in 1946 and 100,000 tons on 1945).

Jagdish C. Aggarwala, of Rajindera Niwas, Khanna, East Punjab, India, presented the above figures in a special survey of the Indian industry which he has prepared for **PULP & PAPER**. Mr Aggarwala is returning soon to India after spending a couple of years in this country studying the papermaking industry, visiting many U. S. mills.

Mr. Aggarwala presented the following charts to give a picture of the present status of the Indian industry and to indicate its possibilities for growth:

Comparison of Pulp and Paper Industry in India and in the U.S.A.

	INDIA	U.S.A.
Population	400,000,000	140,000,000
Number of Mills	24	996
Investment in Mills	\$9,000,000	2,930,000,000
	Tons	Tons
Paper Production (1945)	100,000	27,300,000
Paper Consumption (1945)	140,000	30,000,000
Number of Wage Earners	19,000	142,000
Per Capita Consumption (1945)	0.78 lbs.	309 lbs.

"India is gifted with rich forest wealth which is spread all over the country," he said. "The high mountain ranges are covered with conifers, and on the plains are prized woods such as mahogany, teakwood and sandalwood."

Modern mechanized logging may make the preferred softwoods of the high Hima-



JAGDISH C. AGGARWALA, of Rajindera Niwas, Khanna, East Punjab, whose survey of the Indian paper industry's possibilities is presented here.

India's First Newsprint Mill Being Started

India's first newsprint mill, a 100-ton plant using native hardwoods known as "broadleaf," is to be built at Chandni, a small station on the Bombay-Delhi railroad. It is scheduled to be in production by June, 1949. P. N. Nair, a government employee and husband of a publisher in India, is credited with development of a hardwood process for that country.

Robert A. Rankin, consulting engineer of Montreal, and A. M. Koroleff, director of woodlands research, Pulp & Paper Institute, Montreal, are helping in the project. Ground has already been cleared. A town of 30,000 is visualized. The mill may later make up to 300 tons daily.

Authorized capital is \$15,000,000 of which only \$4,500,000 will be issued. The government of the Central Province, India, is taking 10% of the share capital.

Nepa Mills (National Newsprint and Paper Mills, Ltd.) is the operating company.

A young Indian woman, Rajul Shah, who graduated from the University of Michigan, is supervising a tree plantation. There are 5,000 square miles of the hardwoods in the Central Provinces. Her program calls for planting 1,500 acres annually.

India imported 40,000 tons of newsprint in 1946. Government officials predict consumption will increase four or five times in the next several years. Most of it still will have to be imported.

layas available. Waterpower projects and highway and communications planned by the government may speed up this paper industry development.

Large scale manufacture of paper in India dates from the establishment of a rag mill on the Hoogly river in the province of Bengal in the year 1870. From 1870 to almost 1925, the history of Indian pulp and paper industry has been one of struggle for survival.

"Smallness of the market, non-availability of good quality raw materials at economic prices, lack of efficient machinery and cheap power, and above all competition from foreign imports did not permit a natural and healthy growth for the industry," commented Mr. Aggarwala.

Since 1910, the history of pulp and paper industry in India has been very closely associated with the development of bamboos as a source of raw material. Bamboo, due to its abundant availability,

rapid growth and long fiber length received the attention of an Englishman, Thomas Routledge, as early as 1870. But in those days the pulping of hard and lignified materials had made but little progress. In 1905 R. W. Sindall, while working for the Government of Burma, investigated the possibilities of using this abundant raw material for papermaking. His report "Government of Burma Forest Record," marked a considerable advance in bamboo pulping but he came up against the apparently insuperable difficulty of bleaching, said Mr. Aggarwala.

"Meanwhile the government of India was taking an active interest in this matter," he said, "and as a first step authorized R. S. Pearson, forest economist at the Forest Research Institute located at Dehra Dun in the United Province, to make an extended survey of the principal bamboo growing areas of India to ascertain whether or not this raw material existed in commercially exploitable quantities. His report published in Jan. 1913, effectively established the existence of quantities large enough to be termed 'inexhaustable.'

"Meanwhile W. Raitt was carrying out extensive experiments on bamboo pulping. Mr. W. Raitt made a major contribution to the development of India's industry when he developed the fractional digestion method for bamboos and grasses that produces an easy bleaching bamboo pulp (published by Crosby Lockwood & Sons, London, 1931). By 1925, bamboo became the principal raw material for papermaking in India, and the government granted special protection to the bamboo pulp industry."

During World War II there were 15 paper and board mills operating in India having 33 machines capable of producing a total of about 110,000 tons of paper and paper-board per annum. Mr. Aggarwala presents these figures for 1946:

Production in India in 1946		Tons
Writing and Printing Paper		65,139
Wrapping and Kraft		15,809
Paperboard		18,480
Strawboard		14,504
Others		6,825
Total		120,757

Tissues, air-mail, banks, bonds, ledger papers, cartridge, kraft, blottings, filter papers, duplex and triplex boards, are all made in India from bamboos and grasses and, he said, their quality compares favorably with those imported.

But Other Materials Must Be Used

But new demands on the industry in India and plans for making greaseproof parchment, cigarette papers, etc., will



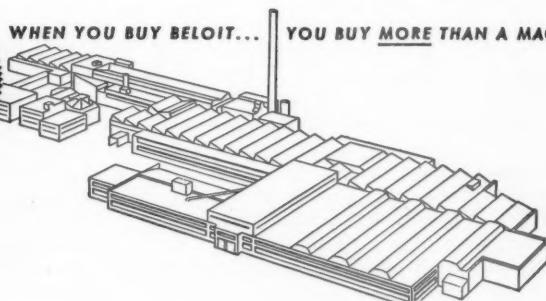
Straight paper run

Note the straight paper run accomplished by this Beloit 246" dual press—No. 2 machine at West Virginia Pulp and Paper Co., Charleston, South Carolina. No broke conveyor is required on this high

speed kraft paper machine, and changing felts is a simple operation. As shown, air and electric control panel is conveniently located, and there are pneumatic nip controls.—*Beloit Iron Works, Beloit, Wis.*



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PAPER MACHINERY

necessitate the exploration of new raw materials, and the working out of proper methods for their pulping and processing.

According to Mr. Aggarwala, the Dehra Dun Institute estimates that an annual supply of about 700,000 tons of bamboo is available in different parts of India. Next in importance as a raw material is Sabai grass (*Eulaliopsis binata*). Nearly 60,000 tons of this grass are available per year in U. P. Bihar, Orissa and Punjab provinces. Cotton rags, flax, hemp, jute waste, and cereal straw are the other sources of raw material. In 1944, nearly 30,000 tons of these wastes were used by the Indian paper industry.

India, being the largest producer of sugar cane in the world, has nearly two million tons of bagasse which can be made available per year for conversion to paper and boards. Another useful raw material is cotton linters, quite large amounts of which are available for use by the paper maker.

Newsprint Now in Demand

Newsprint has not been manufactured in India up to present time because its total consumption in India has been small until fairly recently. During 1946, nearly 40,000 tons of newsprint were consumed in India and all this imported from foreign countries. At present people in India are becoming more newspaper-minded. The consumption of newsprint may be expected to increase by four or five times in the next few years, says Mr. Aggarwala. A further reason why newsprint production has not been undertaken in India lies in the fact that adequate supplies of suitable raw materials for the production of mechanical pulps have not been available at economic prices and in

THILMANY'S OLD NO. 5... IT IS SHANGHAI BOUND

Shanghai is the destination of the Old No. 15 paper machine of the Thilmayn Pulp and Paper Company of Kaukauna, Wis. Having made primarily tissue grades of paper at Thilmayn for 51 years, Old Number 5 will now start a new career with the China Fibre Container Co. of 273 Haichow Road, Shanghai, China. In China Number 5 will produce paper from bamboo fiber, something entirely new for Number 5 in a country that has produced paper for 2,000 years.

On its last day of service at Thilmayn, Number 5 turned out 25 lb. brown stripe for conversion into bags. The machine was built by Oscar Thilmayn in 1897 from modified German plans and filled out a complement of three "Flying Dutchmen." Its first job was producing 10 lb. tissue for the fruit wrap trade of California. This was the first all-sulfite sheet made by Thilmayn. Later it made "Japanese Tissue," also a 10 lb. basis weight sheet. Altogether, Number 5 produced 200,000 tons of paper for Thilmayn.

The new boss of Number 5 will be Mr. A. Kelen, manager of the China Fibre Container Co.

localities where the manufacture of newsprint could be undertaken," he said. "At present, however, the government is exploring ways by which rapid development of this industry may be brought about."

The Forest Research Institute at Dehra Dun according to his description, is the leading research institute in the East engaged in pulp and paper research. It has a 36 inch Fourdrinier machine, an experimental Voith grinder for mechanical pulping, and woods tested include *Abies pindrow* (fir) and *Picea morinda* (spruce) but there are logging difficulties because these woods are mainly on the high Himalayas. The power requirements are difficult to meet, thus hampering the newsprint industry. The government has extensive hydro-electric projects planned and the means of transport are being rapidly improved.

The newly created Moslem state of Pakistan contains not a single pulp or paper mill. All the paper industry and most of the raw materials have remained in India. An Indian paper industry would not only have a tremendous home market, but also possibly an export market in Pakistan, Burma, Siam, Indo-China, and other nearby countries.

COAST PLANS FOR YEAR TAPPI in Bellingham Sept. 28

The Pacific Coast Section of TAPPI, the oldest division of that association, has mapped out its program for the coming year. It will probably be the biggest year of the section's 20-year history because it is going to be climaxed with a national convention of TAPPI sponsored by the Coast group in Portland, Ore. (Multnomah hotel), Sept. 12-16, 1949.

It will be only the third, but undoubtedly, the biggest national meeting held on the Coast. A. G. "Buff" Natwick, assistant resident manager of Crown Zellerbach's biggest mill at Camas, Wash., and Russell J. LeRoux, manager of the Everett, Wash., pulp mill of Weyerhaeuser Timber Co., are teaming up as the co-chairman of this event. Latest developments in sulfite and kraft pulping, engineering, papermaking and industrial relations will be covered in a comprehensive program and tours of new modern mills, recovery plants, multi-stage bleach plants and woods operations on the Columbia River will be special attractions.

The program of Tuesday bi-monthly afternoon-and-evening meetings as sched-

uled for the Coast Section, follows (date, place and topic of discussion):

Sept. 28—Bellingham, Wash.—Engineering.

Nov. 16—Camas, Wash.—Slime Control.

Jan. 11—Univ. of Washington, Seattle—Non-standard Analytical Methods.

April 8—Longview, Wash.—All Shibley award contest papers will be given at this meeting.

The program for Longview is a departure from practice of past years, when one Shibley paper was given at each meeting. There will be no joint spring meeting with the Superintendents Association next year because of plans for the national convention. The winner of the Shibley contest will be announced at the national meeting, according to present plans.

Delegations from Pacific Northwestern Universities and colleges will be invited to the Longview meeting. These special invitations to college students who may be considering entering this industry was inaugurated this past year by Coast TAPPI and it was a highly successful project.

New Zealand Plans For Mills Are Advanced

Having been advised by experts that a pulp and paper industry on New Zealand is feasible, the government of that dominion is planning to assist New Zealand Forest Products, Ltd., in the establishment of a \$20,000,000 mill at Rotorua. The company invited a Swedish pulp and paper engineer to report on its plans.

New Zealand government spokesmen believe that their country will eventually become an important manufacturer of newsprint, based in part on the rapidity with which New Zealand pine attains maturity.

A Movie for Centennial

A 20-minute movie "Paper, Mister", in color and sound, was shown free to visitors to Wisconsin's Centennial Fair in Milwaukee in August, in a plastic paper theater.

The movie illustrates the size and importance of Wisconsin's paper industry and was sponsored by 69 Wisconsin firms.

It was produced by a group under A. C. Gilbert, president of Gilbert Paper Co., Menasha, Wis., who was general chairman of the pulp and paper industry's centennial plans.

M. J. Schulenburg, assistant to the president, Kimberly-Clark Corp., served as executive chairman; Owen E. Lyons, advertising manager, Marathon Corp., was chairman of the movie production committee which included Alan Pradt, Rhinelander Paper Co.; Tad Meyer, Nekoosa-Edwards Paper Co.; Norman Zansig, Thilmayn Pulp and Paper Co., and P. R. Rundquist, Marathon Corp. A. C. Hase- low, Gilbert Paper Co., served as chairman of the theater construction and operating committee, assisted by Wallace Brown, Kimberly-Clark Corp.

PASC Discusses Felts

Papermakers and Associates of Southern California met at Ivan's, Lynwood, Calif., July 15, for a round-table discussion which centered largely on felts and machine maintenance connected with felt operation.

Jack Rhodes was master of ceremonies, and the panel was composed of Larry Woodside and Harry Stilwell, both of Albany Felt Co., Frank Wheelock, of Fibreboard Products, Inc., and Oscar Bigler of Volney Felt.

A committee for education and public relations has been chosen, headed by W. A. Kinney of Pioneer-Flintkote. Other members are George M. Cunningham of Nopco, and Arthur W. Ponsford, Southern California editor.

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(Left) Fabricating a hydropulper for Dilts Machine Works, Fulton, N. Y., Div. of Black-Clawson, Inc., Hamilton, Ohio, in the plant of Smith & Caffrey Co., Syracuse, N. Y. (Right) Installed hydropulper, showing Lukens Nickel-Clad Steel on tub sides and bottom plates surrounding the rotor; in use at National Paper Corporation, Ransom, Pa.

Self-cleaning and corrosion-resistant properties of Lukens Nickel-Clad Steel for hydropulpers make an important contribution to their excellent service records. The above hydropulper has been in service at the National Paper Corporation, Ransom, Pennsylvania, for more than 16 months without a shutdown for maintenance.

In operation, the work-polished walls of Lukens Nickel-Clad Steel, with the cladding on the inside, require no sluicing down, in contrast to the former type tubs which required at least one sluicing per four fills. This factor was the major contribution in increasing the machine's output approximately 20 per cent. In addition, there is no metallic pick-up to impair the

It's made of Nickel-Clad Steel



quality of tissue made from furnish produced here.

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MEXICO CITY'S MILLS

New Ribot and Fenix Plants

In the close-by suburbs of Mexico City are five brand new paper mills now being completed or already in operation.

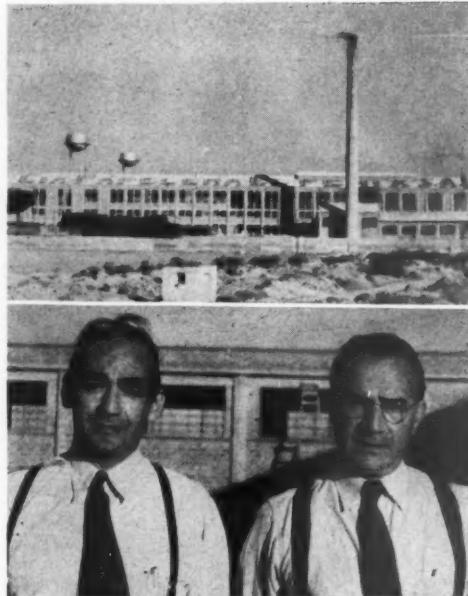
Fine looking brick or concrete and steel structures have been built. There is one entirely new machine, others rebuilt or partly new. In some cases, it was impossible for the Mexican companies to obtain anything but used and rebuilt equipment.

In a tour of the Mexican industry, **PULP & PAPER** visited all of these plants earlier this year as they were approaching completion. In all cases, they are fine, modern looking plants and they are important new units in the phenomenally speedy transition of Mexican pulp and paper industry from a scattering of small, backward operation to a first class industrial enterprises.

Nowhere else in North America can one see so many paper mills in the environs of such a large city — Mexico City has a population of 2,000,000, double its population of just 15 years ago. Besides these five new mills, the Mexican capital has five other paper mills which are not new within its immediate borders. Some of these have been modernizing their operations.

In previous issues of **PULP & PAPER** we have described the mills of San Rafael and El Progreso, headed by Don Jose de la Macorra II, and the new kraft mill at Atenquique now owned by the government.

The new mills in Mexico City environs include the new Papelera Nacional S.A. (two fine paper or cigaret paper machines) and the new Cartonera Nacional S.A. (with a 300-ft. long board machine)



VIEWS AT THE FENIX PAPER CO. taken by PULP & PAPER:

Top: General view of new plant.

Below (l. to r.): CARLOS GARCIA ROBLES, Assistant Manager and Construction Engineer; RICARDO GOMEZ, Manager.

which stand side by side on a sloping hillside at Tlalnepantla, northwest of Mexico City, operated by new companies which are also headed by Don Jose. Here is an entirely new industrial city, built to house 40,000 persons, including also a new Westinghouse plant, glass plant, fertilizer

PICTURES TAKEN BY PULP & PAPER at the new mill built on the northern city limits of Mexico City for La Cartonera Moderna S.A.:

At left is the machine room building which eventually will house three machines — one more than the company now has.

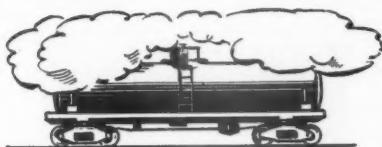


At right is the new windowless corrugating plant.

At top (left to right) are: DON FELIX RIBOT, Cuba-born General Manager of the company, and his young son who is learning the business and will represent the third generation in it; DAMIA CARRO, Mill Manager, and AGUSTIN TOUSSAINT, Sales Manager.



Putting a Blanket of Air



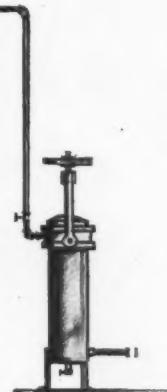
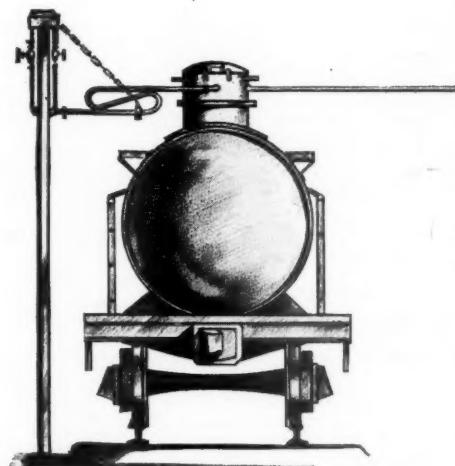
on Chlorine

The development of a chlorine evaporator that maintained a constant gas temperature solved only a portion of the chlorine flow problem. Hooker engineers next tackled the problem of keeping the pressure constant. This was solved by applying regulated air pressure to the liquid chlorine in the tank car.

A relatively simple air cooler and drier was designed and constructed to operate in conjunction with an automatically regulated air compressor.

Another problem, that of preventing the corrosive action created by the backflow of chlorine in the air system, was also solved. To prevent this backflow, a new check valve was developed with two $7\frac{1}{2}$ pound plungers. These plungers placed a mechanical pressure on the seat of the valve at the time of closure and assured a greater degree of safety against leakage of chlorine. The sum total of the two plungers being 15 pounds, pressure of the air system was maintained at 15 pounds higher than the pressure of the chlorine system.

These advances in the safe and convenient handling of chlorine are only part of the story of Hooker's long and close relationship with the pulp and paper industry. Hooker continues to provide helpful service by supplying uniform high quality chlorine, caustic soda and other chemicals. For your pulp and paper making you can always depend upon Hooker Chemicals.



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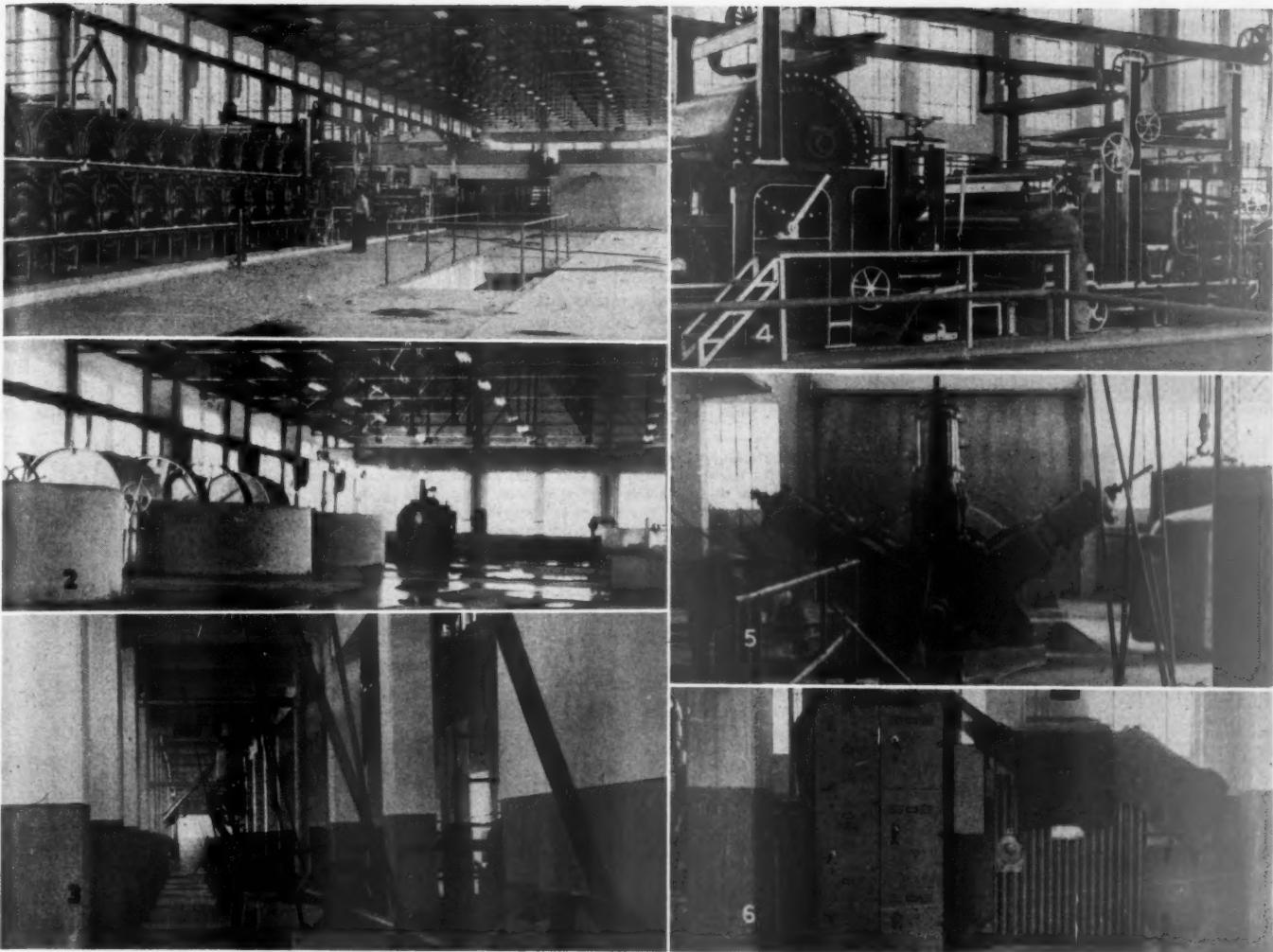
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SCENES AT CIA. PAPELERA "EL FENIX" S. A. (Mexico) 1. General view of 92-inch Fourdrinier machine and beaters in background on mezzanine. The machine came from Water Fall, Maine. There is shown space on right for the 64-inch cylinder machine from the old mill.

2. General view of the beater room.

with two Carthage three-pocket grinders and a wet machine. A 64-inch cylinder board machine from the old Fenix mill in downtown Mexico is being moved out and set up alongside the paper machine.

This company is headed by Daniel Montull, a Spanish-born industrial magnate of Mexico who also heads a match company which has new plant alongside the paper mill. More than a million dollars has gone into the paper mill which is a substantial investment in Mexico in relation to labor and construction costs.

Ricardo Gomez, a Mexican who installed the old Fenix mill 12 years ago, has had charge of the work in the new mill and is the manager. In that period of time he has been in the paper industry and prior to that he headed a machine shop.

Carlos Garcia Robles, the assistant manager and construction engineer for the new mill, is likewise a Mexican whose father was a former general manager of the Progreso mill of the San Rafael company, and Senor Robles was born in Progreso. He graduated as a civil engineer from the University of London and was in the technical department at San Ra-

fael for seven years, followed by ten years in industrial construction work in Mexico City.

There is plenty of room in the new Fenix mill around the machinery and, like new mills at Monterrey and Atenquique, it has papermaking equipment all on a second floor level, which is something new in Mexico. It is one of Mexico's best naturally lighted mills, with more glass than walls in all the walls of the paper mill. This means plenty of light with sunshine almost constant in daytime in that country.

For further expansion of the Fenix mill, the south wall already has a row of concrete cantilevers for a traveling crane in a possible future mill. Only three walls, therefore, would have to be built.

Work on the new mill was begun in September, 1944, and it was still not entirely finished this spring, owing to delays in equipment or materials deliveries. The buildings are all of concrete and brick. Two warehouses have been built and a third warehouse and an extensive L-shaped finishing plant are being completed. An asbestos-cement roof and steel

3. Variable speed line shaft for paper machine on the ground floor.

4. Detail of the press section, showing Rice Barton 60-inch diameter dryer.

5. Carthage Machine Co.'s three-pocket grinders.

6. The 500 KVA - 550V G.E. indoor type power transformer.

trusses are above the 340 ft. long, 60 ft. wide paper mill.

The Fourdrinier machine, necessarily second-hand, came from Water Fall, Me., and it is in good shape. It will have to be a versatile machine for the Mexican market, making bond, ledger, kraft paper and wrapping and possibly even tissue, including facial. About ten tons per day of wrapping is averaged, although it has made up to 25 tons of heavy paper.

A Rice Barton 60-inch diameter dryer was added to the original equipment in order that it might be used for facial tissue, toilet or crepe paper. Also a pick-up felt has been purchased for this purpose, and if this succeeds the machine will make paper ranging from 25 grams to 350 grams per square meter.

A Bird rotary screen and an Apmew flat screen are ahead of the machine, and there is a 2-slice headbox. In addition to the big Rice Barton dryer, it has 24 Union Machine Co. dryers.

On a balcony above the wet end are four E. D. Jones 1,000-lb. beaters. When the cylinder machine is installed along-

side, two more 750-lb. beaters will be installed. Here also is a new Apmew pulper of 12 ft. diameter, which seems to be a popular model in Mexico because of low price.

On the ground level floor is the steam engine drive for the paper machine, operating with pulleys. Stock tanks and machine shop are also below. At the opposite end of the mill the balcony looks down on the groundwood mill, with the two grinders, a new Impeo rotary screen and a 24-blade Apmew flat screen. There were only two shifts in the small groundwood plant when visited by **PULP & PAPER**, but it has capacity for 10 to 12 tons when it goes to full day operation.

Power for the entire mill totals 2300 hp. All electrical power is bought from

a power company. The mill has the new indoor type of General Electric Co. transformers, one of 750 kilowatts and the other 500. Buss bars are enclosed, so they can be installed inside the mill. A new Babcock & Wilcox Stirling type 250 hp boiler has been installed.

A six-ton crane travels the 340 ft. length of the mill.

Ground area for the entire mill is about 300,000 sq. ft.

For wrapping paper, the mill uses about 85% waste paper and 15% groundwood. The groundwood is made out of spruce, purchased in two-ft. peeled lengths from the mountain Indians in Mexico City environs and hauled to the mill by truck. For other paper products, the ratios of waste paper and groundwood or pur-

chased kraft pulp from the new Atenuque kraft mill in Jalisco province, or from abroad, are of course, greatly varied.

Fenix was employing 90 persons but was to have 150 on its payroll after the other machine is installed.

LA CARTONERA MODERNA

La Cartonera Moderna, S.A., a two-machine light board manufacturing company, has built a fine-looking new brick and concrete plant right on the northern city line of Mexico City and has left space for a third machine in the new building.

This company was founded in 1905 by Don Jose Ribot, Sr., who came from Cuba with his two sons. The family had been in the textile industry in Cuba, and

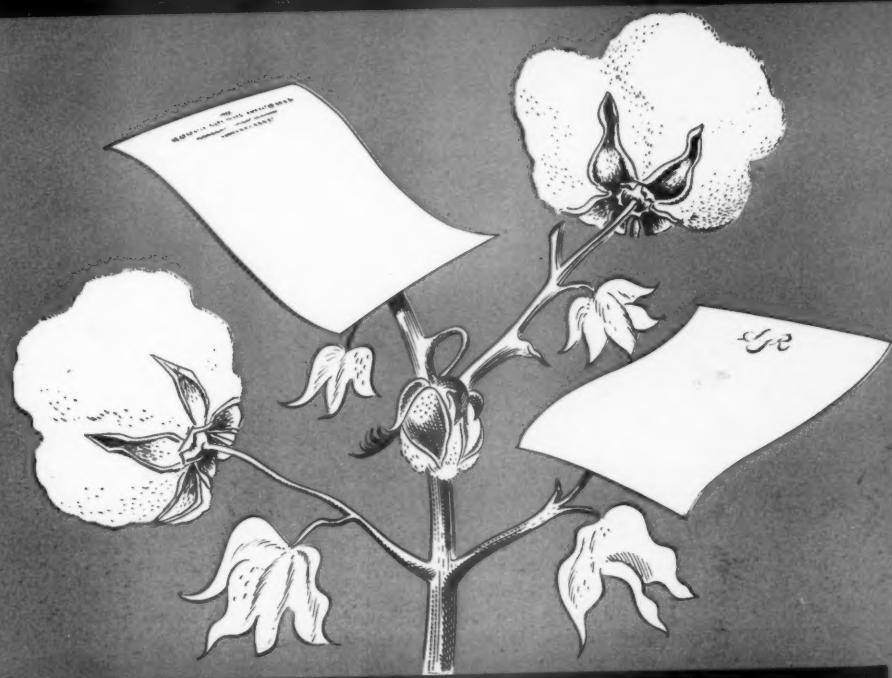
EQUIPMENT AND PROCESSES AT LA CARTONERA MODERNA in Mexico. Upper left, No. 1, Thiry (Belgian) paper machine at left; No. 2, Shartle Bros. (Middletown, O.) machine at right. Upper right, Babcock & Wilcox boilers of 200 HP. each. Lower left, "Gang" pulpers. Two in back are of German make; two in front, home-made (in the mill). They shred waste paper which is necessary because of metal waste in the paper. Lower right, Heavy board from the wet machine is being dried. It is brought into drying room in small rail car and hung to dry, a method still acceptable for some products because of the favorable Mexican climate.



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Good usable cotton rags for papermaking are getting scarcer, more costly every day. But papermakers do not have to accept less satisfactory substitutes. Hercules Bleached Cotton Linters are rapidly gaining acceptance as high quality extenders for rags. Their performance in rag-content writing papers, for example, is well known. Their clean virgin fibers contribute good color, permanence, feel, bulk, opacity, and sheet structure to the paper. Write for helpful technical information on adapting Hercules Bleached Cotton Linters to your paper processing.



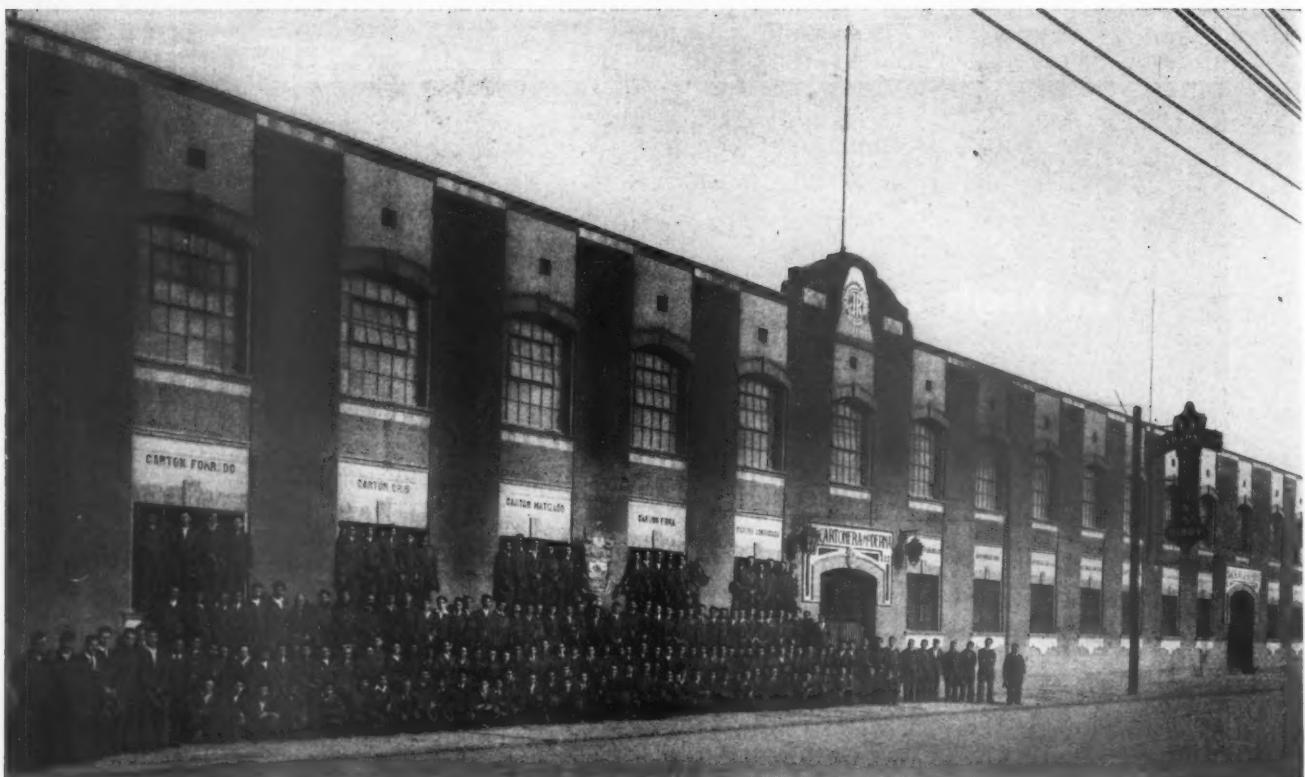
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HERE EMPLOYEES OF LA CARTONERA MODERNA in Mexico City stand in front of old Ribot mill at Calle 5th de Febrero, only 11 blocks from the National Palace in the center of the city. A new mill on the city outskirts was completed this year.

got into the Mexico City paper industry by investment and later by taking over the management. The father died in 1931 and Jose, Jr., died in 1946. Don Felix Ribot, the elder brother by one year, now is general manager and the company also goes by the name of "Hijos (Sons) de Jose Ribot.

Don Felix told **PULP & PAPER** that he intends to purchase a third machine in about two years, but meanwhile he is adding cylinders and dryers to the present machines and upping their production from about 14 tons of boxboard, chipboard and other light board to 27 tons daily production.

No. 2 machine is a second-hand Shartle Brothers 72-inch, 8-ton capacity machine with two cylinders and 15 dryers. Because he originally obtained the machine through the Middletown, O., firm, Don Felix has gone back to them for additional equipment which includes 3 additional cylinders and ten more dryers, giving it two dryer sections. There is also an additional press, an additional calender stack and at the head of the machine is an additional screen, this one from Bird Machine Co. The lengthened and improved machine will make 15 tons of light board.

For similar reasons, Don Felix has gone back to Thiry & Co. of Huy, Belgium, for additions to the No. 1 machine which Thiry originally built and installed. There will be five dryers added to the present eight as well as an 8-ft. diameter Yankee.

The No. 1 machine is 49 inches wide and has been making about 6 tons daily

since back in 1930, but will be stepped up to 11 or 12 tons.

Both of these machines were being moved from the old mill which is located in the "Workers' District" of Mexico City (but workers do not live there any more since it has become industrialized). Here the mill property was becoming too cramped, especially since the government took a whack out of the warehouse space to make a new street. It is just three minutes from the Cathedral.

Being just outside the Federal District of Mexico in the new mill, the company will have less taxes to pay. The machines were run in the old mill right up to the time the new mill was ready for them. New auxiliary equipment, including motors, and even some Canadian pulp and waste paper were already housed in the new structure when we saw it. The south wall of the new mill grounds, which comprise 80,000,000 sq. ft., is right on the district or city line.

One of the two 200 hp Babcock & Wilcox boilers which the company had purchased in the late '30's was already moved and there was space in the new plant for a third boiler.

A new corrugating plant was also completed, built without windows in modern U. S. industrial style, but Don Felix was not too pleased and thought he might put in windows. Like many Southern plants, the roof line looked like the teeth of a saw, with panes of glass at an angle in order to catch the northern light rather than the extreme southern sun glare.

The old wet machine with which the

Ribot family made their start in the industry is still operating, and now only makes book cover paper, which is pressed in a baler and then hung in pieces under a galvanized roof and in an open shed, to dry. Lots of heavy crude paper of this type is hung in the sun or even spread on grass to dry in the reliable and strong Mexican sun.

A Joseph Eck supercalender from Dusseldorf, Germany, and several cutters, including a brand new Cameron No. 14 papercutter were among equipment for the new mill.

The new equipment is mostly coming from the United States, but Ribot, Sr. said that even more might have been purchased in U. S. but that European manufacturers were able to make deliveries in one-third or one-fourth the time.

The new machine room is 500 ft. long, 108 feet wide and 27 ft. high. Assea (Swedish) motors serve the machines—a 46 hp. motor for the No. 2 dryers and 38 hp. for the No. 1 dryers and variable speed motors for the wet sections. The cylinder molds were made in Mexico. There are six new beaters and a new Apmew 12-ft. diameter pulper, with room for two more pulpers. Two new jordans come from the U. S. and the Westinghouse motors for them were already in place.

It is surprising to hear that this new mill, which is in view of the city's new bull ring, was begun way back in 1944. It was impossible to get much new equipment and there were long delays. There was no cement available for a long time; then there was a shortage of steel.

For raw material the Ribot mill ex-

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pected it probably would have to continue to buy mechanical pulp from Sweden (\$135 a ton in first months of this year) or get a little trickle from one or two of the five groundwood mills in Mexico, because virtually none was available from U. S. or Canada. The Ribot mill was paying up to \$235 a ton for bleached sulfite and it also uses some unbleached sulfite. Kraft pulp is bought in Mexico.

Usually about 22% of purchased pulps is mixed with 78% of waste paper for the Ribot mill products. As in most other Mexican mills, this waste paper is ground up in the gang type of beater or defibrating machines, with two big stone wheels—a type of equipment seldom seen in the north. But the waste paper comes with so much metal in it, the Mexican mills prefer these wheel gangs. At the Ribot mill two are German-made with stone wheels but two others were home-made with wheels of cement. They were doing quite all right, too.

Chief assistants to Havana-born Felix Ribot are his Spanish mill manager, Damia Carro, and his Mexican sales manager, Agustin Toussaint. Senor Toussaint said the boxboard and chip board is harder to sell in Mexico than paper. But now a 20% ad valorem tax on imports of this board should help the Mexican industry. About 100 boxboard customers in the environs of Mexico City look to three or fours mills there, such as Ribot's, for their light box board.

Don Felix speaks English fairly well; his mill manager speaks only Spanish, but Senor Toussaint is quite fluent in English.

The new address of La Cartonera Moderna, S.A., is Calzada de Tacuba Nauacalpan, esquina (on corner of) Calle Ahuizotla. This is just five miles northeast of the center of the city.

Harold Murdock to Open Own Offices in Tokyo

Harold R. Murdock, who for the last couple of years has been serving in an advisory capacity on General MacArthur's staff in Japan, helping to restore the Japanese pulp and paper industry, is

JAPAN'S NEWSPRINT MILLS

Use Volcanic Ash; Semicchemical Pulp



HAROLD R. MURDOCK (right) of Asheville, N. C., was first recipient of the Murdock Medal, which he holds—an award named in his honor and to be granted annually for distinguished service to the Japanese pulp and paper industry. Shigenao Kanai (left), president of the Japanese Pulp and Paper Association, made the presentation. Mr. Murdock, head of Pulp & Paper Branch, Natural Resources Section, Supreme Command Allied Powers, received the award for introducing new methods of increasing pulp and newsprint production (see May PULP & PAPER, page 52).

planning to remain in Tokyo as a consulting chemical engineer and as representative of some American concerns. He was formerly an industry consultant in Asheville, N. C.

He expects to open his own office in Tokyo this fall. Among companies he will represent will be Bulkley, Dunton Cellulose Exports, Inc., 295 Madison Ave., New York, under the management of L. W. Bowmall, vice president.

Mr. Murdock is also going to help direct the operations of some of the Japanese paper companies. He may also do consulting work for Japanese chemical industries.

HAROLD R. MURDOCK, who plans to open offices in Tokyo as a consulting chemical engineer after completing advisory work with General MacArthur, is seated at head of table in this picture, checking over mill operations on semi-chemical sulfite pulping at the Sakamoto mill of Oji Paper Mfg. Co., in Kyushu.



In one of the pictures on this page he is shown holding a conference with the staff of the Sakamoto mill of Oji Paper Mfg. Co. Mr. Murdock in 1947 suggested to this company that it convert its entire sulfite production over to a semi-chemical acid sulfite process to save pulpwood, and now the company is in full production under the new system.

Pulpwood is in very short supply today in Japan, according to direct advices from that country received by **PULP & PAPER**.

Japan produced 99,615 tons of newsprint in 1947, according to information received by **PULP & PAPER**. This compares with 83,262 tons in 1946. The 1947 production is 62% of the reported effective capacity of all newsprint mills, and 45% of the estimates of installed capacity.

In July, 1947, the Hokuetsu Paper Manufacturing Co. started its newsprint machine which had been idle since 1942.

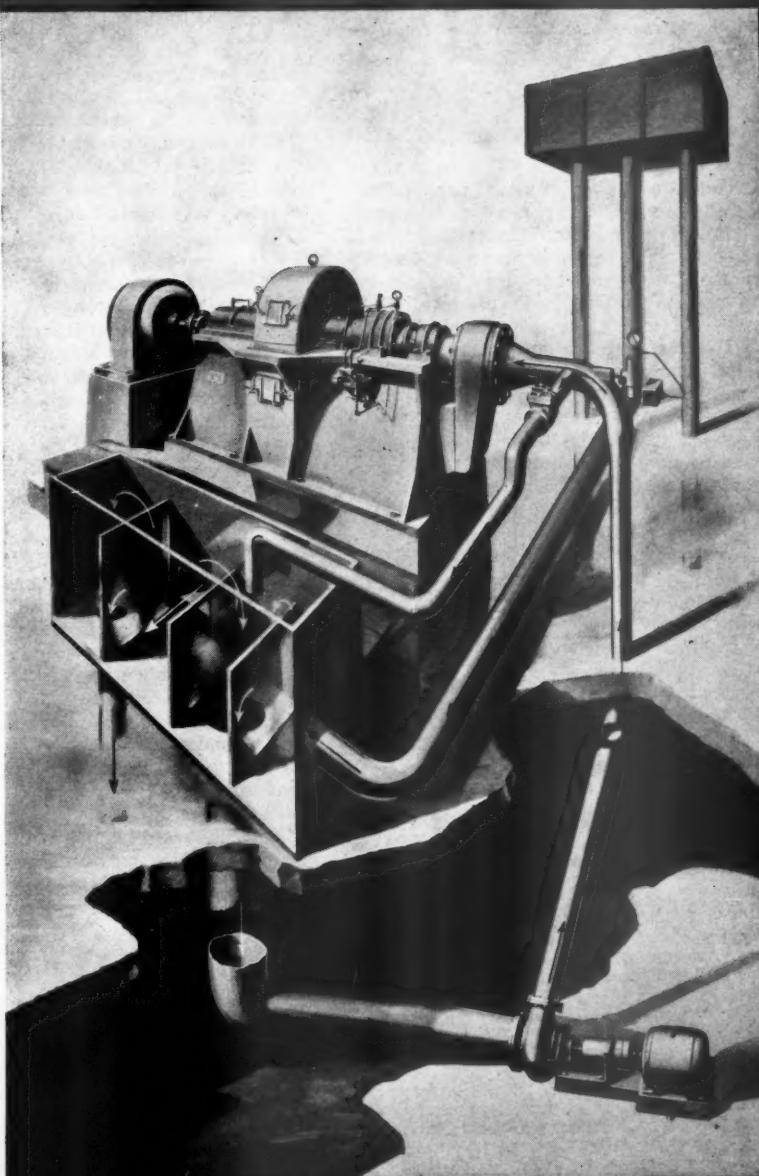
Production in Kyushu was assisted by the use of 5% volcanic ash in the furnish. This ash absorbs the resin in the pine groundwood sufficiently to correct the trouble of pitch formation on the paper machine. Previously, 25% of pine sulfite had to be used to overcome the pitch trouble. Now only 20% sulfite pulp is needed.

Semi-chemical experiments have been successfully carried on at the Sakamoto mill of Oji Paper Manufacturing Co. and the Niigata mill of Hokuetsu Paper Manufacturing Co. The use of this pulp in newsprint production has been started. The process uses the regular calcium acid sulfite cooking liquor and equipment normally used in the production of regular sulfite pulp. Yields from 52 to 70% based on the air dry wood have been reported.

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Replace old fashioned equipment, though it may be fairly young in age, with modern Sutherlands. They give the maximum amount of pulp per square foot of floor space. This can all be done with substantial savings in power and maintenance costs.

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SUTHERLAND

The Pulp and Paper Industry AND THE C. E. D.

By J. D. Zellerbach
President, Crown Zellerbach Corp.

The pulp and paper industry is one which is basic in our American economy.

It is important because of the number of people who sell their services to the rest of the people, through the activities of this industry. This particular aspect of the industry must not be overlooked, however. There are hundreds of thousands of families, millions of men, women and children, who depend on this industry as a means of exchanging their work for the purchasing power they need. It is through the many operations from the forests to the use of the grocery bag or the newspaper or the calling card that they find jobs. And because the whole population wants the products of the industry, it pays the price for the daily work of all in the industry.

It is important also because of its place in our international relations. The volume which the industry imports from Canada, chiefly newsprint and pulp, makes possible the sale of a similar volume of United States products to Canada, the sale of the services of other large groups of American workers. The special purpose papers which the industry sends abroad make possible the progress of industry and agriculture in many lands. The consequent improvement of the standard of living in those lands makes for more active world trade and more promise of world peace.

But the industry is even more important because of its influence on our own way of life and our own standard of living. The per capita consumption of paper products in the United States is five times as great as in any other nation in the world. With this great use of paper and paper products, every phase of our way of living is enriched in some manner. We can read more widely. We can conduct our business more promptly and accurately, through better communications and better records. Our foods are delivered to us, in season and out, near and far, kept clean and fresh. Construction is aided by paper from the first sketch and the blueprint, through the packaging of materials like cement, to the paper on the wall of the finished home. The quality of almost every product used in our daily lives is improved or protected by paper. Tires and even automobiles are wrapped in it. Food in cans bear labels and is packaged and shipped in paperboard containers. Science depends on paper for the recorded facts and calculations which lead to such discoveries as penicillin and atomic energy, and to such achievements as the San Francisco Bay Bridge and the DC-6. Our modern civilization, our industrial, commercial and social way of life, would be inconceivable without paper and paper products.

J. D. ZELLERBACH—"Are we going to let ourselves be talked into another depression? I, for one, have more faith in the American public."



Because of this intimate connection with all activities of our national life, the pulp and paper industry is intimately concerned with the tempo of those activities. Because it is essential to those activities, ours is a basic industry in one sense. But because of that same relationship, it is acutely sensitive to changes in the scale of general economic activity.

The pulp and paper industry shared the whole experience of the nation in the depression of the thirties. As unemployment spread in steel, autos, building, transportation and trade, workers in those industries used less paper and paper products. As retail sales of consumer products declined, less paper was used for wrapping and bags. Less newsprint was used for advertising. The workers in the pulp and paper industry could not sell their services in their products to other workers who had no jobs.

No matter how well the job may be done by workers, managers and sales people in the pulp and paper industry, their welfare is still affected by the wide swings in the economy of the nation. Their interest in guarding against extremes is as great as that of the people in any other

Expansion in Far West

Development of heavy industry is a new and important factor in the economy of the Pacific Coast, J. D. Zellerbach, president, Crown Zellerbach Corp., San Francisco, Cal., told CED trustees recently. The establishment of basic metals industries, particularly steel and aluminum, Mr. Zellerbach said, make possible the development of heavy industry in the far west.

"Established through allocation of large war contracts," Mr. Zellerbach said, "the steel and aluminum plants of the west are there to stay. Since 1945, industrial plant expansion has exceeded any previous period in the history of the west. Eastern manufacturing companies, following the decentralization trend, have built and are building plants in the west to serve this market. In California alone, in the past 2½ years, there were 4,650 projects—new plants and expansions—started or announced, with a capital investment of about 700 million dollars. In the Pacific Northwest, over 100 million dollars in new plant and expansion has been started or announced in the pulp and paper industry alone.

industry, greater than that of people in many industries. It is proper and natural that representatives of this industry give time and effort to such an activity as that of the Committee for Economic Development, devoted now to avoiding the drastic swing between boom and bust.

Purpose of CED

The faith and purpose of the Committee for Economic Development (generally known as CED) are well expressed in the following quotation from its long-time chairman, Paul G. Hoffman, president of The Studebaker Corporation, and now administrative head of the European Recovery Administration:

"Depressions are not 'acts of God.' They are man made. Even the traditional escape clause of 'fires, floods and other acts of God' is losing meaning in these days of increased enlightenment as to fire and flood prevention and insurance against other unforeseeable hazards.

"I firmly believe that we can greatly reduce the public hazards of booms and busts just as we have in such large measure softened the impact of these other formerly taken-for-granted disasters. But the first and perhaps the biggest step in that direction will be to make up our minds to do something about it instead of meekly bowing to the bogey man.

"The central purpose of the CED is to take the principal factors that affect the business cycle, subject them to thorough, critical and unbiased examination to determine their influence on our fluctuations and then try to find out what can be done to make each factor work more effectively toward high productive employment and a resulting better business stability."

The CED has a history which makes it peculiarly fit to contribute to the objectives suggested in this quotation. It was born in the midst of war, when almost everyone was talking about "inevitable" postwar unemployment, ranging from eight to 16 millions. The CED was a voluntary organization of private citizens, interested in commerce and industry, in management, labor and investment. They were men who refused to bow to this talk of an "inevitable" depression. The CED enlisted the cooperation of many other organizations. Our country was combed from coast to coast by committees aggregating over 60,000 businessmen whose function was to get American employers to plan for high-level postwar employment and no depression.

I do not need to tell you what happened. Today, people are "talking up" another depression, perhaps to come in 1950. A lot of people will listen to this loose talk. Here we are with more money, more jobs,

how about your SLITTERS?



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OK features:

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SPECIALY HEAT TREATED
EXTRA CLOSE TOLERANCES
STOCK SIZES or made to your
requirements

Manufacturers of
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12

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more wages, more equipment, more skill, more managerial know-how and more of most everything else than we have ever had and many times more than any other nation has today. True, we have shortages here and there, but shortages are symptoms of power to consume—not the lack of it. Are we then going to let ourselves be talked into another depression? I, for one among many, have more faith in the American public.

The CED was formed late in 1942 by U. S. business to plan during World War II for quick conversion, and the attainment of a new high level of peacetime production and employment after victory.

Originally the CED was set up in two divisions. One, the field development division, was formed to stimulate planning at the grass roots toward the above objectives. The national field development division helped organize 2,900 local committees with more than 60,000 businessmen serving as volunteer members.

The other, the research division, sought through objective study to determine what policies of government, business, labor and agriculture would contribute best toward the attainment and later the maintenance of high national levels of peacetime production and employment.

Early in 1946, six months after final victory, work of the field development division was terminated, its task of helping to achieve high employment having been largely completed.

On the basis of a comprehensive survey of results, CED was able to report to President Truman in Sept., 1945, that within 12 months the United States would have 58,000,000 gainfully employed workers, and hence that no prolonged period of serious unemployment was to be expected during the transition from war to peace. The accuracy of this report was shown just one year later when the U. S. census bureau reported 58,370,000 such workers.

All of the activities of the CED are now directed toward the central target of a more stable dynamic economy with high-level employment and production. The objective, which the CED considers to be practical and attainable is a reduction in the cyclical business swings from a maximum of 50% to between 15 to 20%. If achieved, this could bring about a doubling of the average standard of living in the next 25 years.

The procedures followed by the CED in its current research activities consist of four steps. These are: (1) Selecting for study those factors which have important impact upon employment and business stability; (2) designating the economists and businessmen who are to undertake each study and whose first step is to gather all pertinent facts; (3) sifting the facts by subjecting them to intensive discussion by the economists and businessmen, and (4) integrating the facts into suggested policies for action and submitting the recommendations to the public.

Economic Seminars Are Held

During the past year and growing out of the CED research program an important activity was started in the field of

American higher education. Precedent for this had been furnished by the University of Wisconsin and other universities which carried on their liaison operations with the CED beyond the termination of the latter's field activities. Under a fulltime director assigned by the University of Wisconsin, economic seminars were organized throughout the state at which educators and businessmen discussed important problems at the "grass root" level. This activity has been so promising that it is now becoming national in scope and enlisting the interest of many of our leading universities and colleges.

The board of trustees is the governing body of the CED. Paul G. Hoffman was board chairman from the date the committee was organized in 1942 until he was succeeded this year by Walter W. Williams, president of Continental Inc., Seattle, Wash. Ralph E. Flanders of Springfield, Vt., served as chairman of the research and policy committee until he resigned in January, 1947, following his election as United States senator from Vermont. He was succeeded by Raymond Rubicam of New York, co-founder and, until he retired, chairman of the board of the Young and Rubicam advertising agency.

The CED is supported entirely by voluntary contributions from hundreds of

business concerns. It has no relation whatever to any agency of government nor to any private business organization. It maintains offices in Washington, D. C., in Chicago and in New York.

For many reasons, men of the pulp and paper industry are contributing time and effort to the program of the CED, and their companies are contributing to its support. For one good reason, these men have faith that such a program needs the freedom for sincere study and research which can come only through voluntary, democratic action without government control. For another good reason, they feel an obligation as citizens to do their part in making our economy work in such a way as to prevent the hardships which strike so heavily on tens of millions of workers when severe depressions come.

Finally, they are very conscious of the ever-closer link between the welfare of their own industry and the welfare of the country as a whole. They see the duty which rests upon them in their own industry to contribute, through good planning and good management, to the needs of the people at large. They see the larger duty to go outside their industry, to help the CED explore the causes of so-called "inevitable" depressions, and to cooperate with all forward-looking representatives of business and industry to block a depression before it comes.

Swedish Tax Protests

Indications are that the Swedish mills are getting set to make a much more vigorous protest to their government for the removal of the \$14 export tax per ton of chemical pulp. And well-informed sources told **PULP & PAPER** at press time that Swedish mills were to meet late in August to discuss the problem further.

Also, it is known, representatives of import firms in the U. S. have visited Washington to gain the support of government officials in persuading Sweden to eliminate the export tax. And last month government representatives from Washington were in the New York area investigating the Swedish pulp situation with consumers and importers.

Some experts in the U. S. industry believe that ERP and defense appropriations may not affect inflation as much as some Europeans believe, due to the fact that while appropriations and allocations of money take place this year, the actual expenditures would be spread through 1949 and 1950.

One situation against which wise U. S. buyers are guarding is the possible devaluation of European currencies this year. The Swedish kroner is officially valued at 28 cents, but is unofficially sold at from 15 cents to 19 cents. There have been indications of devaluation of currencies in other European quarters, as well as in South America.

U. S. pulp consumers were looking strongly at the possibility of requiring that their European contracts indicate the purchase price in both dollars and kroner, with the stipulation that the pulp be paid

for in dollars at the lower dollar or kroner price computed at the official rate at the time of making payment.

It is pointed out that both the European supply of pulp and the European demand for pulp are above the 1947 level. Production of market wood pulp in Norway continues bad. In Sweden it is expected that the change from unbleached to bleached pulp for both sulfate and sulfite will continue, but officials are saying that the wood supply will not permit any appreciable increase—for 10 to 20 years—beyond the rims in 1948 when Sweden is expected to attain its post-war level.

There has been some misunderstanding in this country regarding the situation in Germany. **PULP & PAPER** learns from reliable sources that the prices at which Germany is purchasing Swedish pulp are only slightly higher than the prices Sweden imposes on U. S. consumers and lower than the prices obtained in other continental countries.

Miss Virginia Peterson is purchasing pulp for the joint Export-Import Agency with headquarters at Frankfort, Germany.

Marathon Employees Vote for AFL Unions

Marathon Corp. employes of Rothschild, Menasha, Ashland and Wausau, Wis., and of Menominee, Mich., voted 1,664 to 42 in favor of a union shop and representation by the two AFL paper industry unions. Vote on a company-wide basis was taken under Taft-Hartley law provisions. The decision affects over 2,000 employes. Some were on vacation.

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Purifying and Bleaching Wood Pulp • Treating of Pulp Mill Water
In the manufacture of DDT Insecticides

Chlorine, as an essential basic chemical, plays an important part in the pulp and paper industry. Chlorine's use for purifying and bleaching wood pulp . . . and as a standard chemical in the sanitation of pulp mill water supplies is well known.

Chlorine, also used in the manufacture of DDT as an insecticide, has proved a boon to forest management.

The many ways in which chlorine touches our daily lives is reflected in the ample facilities of Pennsalt for manufacturing this basic product. Pennsalt serves the nation and particularly the great Northwest with Liquid Chlorine of the highest standard.

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NEW EQUIPMENT IN EUROPE

Much U. S. Machinery Being Introduced

Pulp and paper mills in Europe are continuing to make important advances in the development of new production processes, but recently they have concentrated on methods for conservation of raw materials, heat and power, according to P. R. Sandwell, chief engineer of Powell River Co., Vancouver, B. C., who recently returned from a flying visit to Sweden, Switzerland, France and United Kingdom.

Mr. Sandwell found Swedish pulpwood costs are double the highest costs in North America, that labor is about 50% higher and heat and power costs are about the same.

A project that especially impressed Mr. Sandwell as having possible application in North America was the continuous cooking system developed during the war by Karlstad Makaniska Verkstad in Karlstad, Sweden, which manufacturers all types of hydraulic, pulp and paper machinery.

A pilot plant has been operated at Kalix for about four years, and among the plants now on order is one for Vita Mayer in Italy and one for Avot Vallee in France.

Steam is reduced 50% by this system with capital cost less than for the conventional system. Chemicals required are about the same, but about 40% more power is required. Better control of pulp quality is attained.

A New Type of Barker

At Skutskar in Sweden, where Stora Kopperbergs Tags operates, Mr. Sandwell interviewed Dr. Ragnar Soderquist, the director, and saw the operation of a recently constructed barker consisting of a series of drums, each of which is charged with about 230 logs, filled with water, and rotated.

At this plant, a pair of large drum barkers, partly submerged, treats all logs going to the sawmill. Logs are fed into one end and floated out the other into sorting pockets ahead of the sawmill jack-ladders. Improperly barked logs are recirculated. Sorting pockets are kept free of ice by warm water from the mill. The logs are moved by men with pike poles who walk on floating wooden walk-ways.

All waste from the sawmill is separated into sawdust, which is fed direct to the steam plant, and solid material, which goes to a special chipper fitted with a grip feed which holds thin stock in position while it is being chipped. Chip screening and the breaking of oversize rejects are completed in the sawmill.

Both chips and sawdust are carried to the pulp mill and steam plant bins—about half a mile—in buckets over a cableway. The sawmill chips are of pine and go to the sulfate department of the pulp mill.

Chips are stored at this mill in long bins which are fed by a traveling tripper on a belt conveyor. Discharge from the bins is accomplished by traveling screw dischargers. The bin structure would be costlier than the round silos now coming

P. R. SANDWELL, Chief Engineer of Powell River Co., who saw much new equipment in a tour of mills in five European countries.



into use in North America, but the screw dischargers, Mr. Sandwell believes, might be more effective than the rotary feed or other feed equipment.

Throughout SKT's plant extensions, totally enclosed fan-cooled motors are used almost exclusively. In many cases gear-motors are used, many conveyor head-end drives consisting of gear-motors with the conveyor sprocket mounted directly on the low speed shaft extension without external support. All the new structures are of reinforced concrete construction with air conditioning, with heat recovery widely used. Notable absence of instrumentation and control is due more to shortage of equipment than a lack of appreciation of its value.

At Gavle, Sweden, Mr. Sandwell met J. Spangenberg, director; H. Sandgren, chief engineer; W. Rosen, research and control engineer, and G. Sundberg, sawmill manager, all of Korsnas Sagverks, where the output consists of bleached and unbleached sulfite and sulfate pulp, glazed and unglazed papers and alcohol.

At this plant the sawmill and related plant have recently been rebuilt. The lumber warehouse is of interesting construction, the frame consisting of reinforced concrete columns and girders, pre-cast on the ground and erected like structural steel. Walls are of concrete masonry, the roof of timber trusses.

At Svenska Flaktabriken in Stockholm Mr. Sandwell conferred with Harold Erikson, director; Stig Olsson, export manager; Sven Wellmar, pulp engineer, and K. R. Larsen, timber engineer. This company specializes in industrial heating and ventilating equipment, pulp and veneer dryers, paper machine vapor removal systems and lumber kilns.

Aluminum hoods are now standard manufacture by this firm, and distribution of vapor withdrawal from the paper machines is controlled by apertures in a false ceiling under the hood. In general the ceiling has two slots parallel to the machine, directly over the edges of the felts, diminishing in width as the dry end is approached.

New drives for paper machines being designed by Swedish General Electric Co. (ASEA) emphasize compactness and freedom from water damage. Each section consists of a gear-motor, in some cases the unit being bolted to the machine

frame, thus becoming a part of the machine. Sectional controls are in totally enclosed cubicles.

At Ofvergaard & Co., Stockholm, the Waplans rotary bark dryer was discussed. The pre-drying of bark and hog fuel is accomplished in a rotary kiln, fired by a small dutch oven or by furnace gases from the parent steam generator. The dried bark is burned in the conventional way.

In Utzenstorf, Switzerland, Mr. Sandwell discovered that a U. S.-made stream-barker is being installed at the Utzenstorf Paper Mills because mill production is being increased beyond the capacity of the presently installed Thorne unit. Feeding will be done by yard flume, similar to the arrangement of the newsprint mill at West Tacoma, Wash.

Two German paper machines were in operation at the time of the visit, but the smaller one is to be replaced by a Pusey & Jones machine next year.

The results of several months' operation with a vibrating machine screen have led to a decision to use this type throughout the mill. All suction rolls are evacuated by Sulzer dry rotary vacuum pumps, installed last year. The dryer section is divided for many individual felts, each with its own felt dryer, in the German fashion. All dryer frames are carried right down to the basement. Steam and condensate piping is in the tending isle. Broke is treated in a Grewin system with no operators in attendance.

Vapor from the paper machine hoods is exhausted through Briner type economizers followed by Sulzer water towers, these consisting of chambers filled with vertical twisted aluminum ribbons about one inch wide down which water trickles, and across which the exhaust air is passed. The hot water is used in the stock preparation system.

One of the French mills visited was Papeterie de la Seine, whose director Jean Avot and chief engineer, Gaston Bertrand, were interviewed. During the Nazi occupation a modern Thorsen-Hery stock preparation plant was secretly installed. A modern Kamyr groundwood mill with hydraulic continuous pocket grinders was installed in 1936.

At the Bowaters Paper Mills in London, Mr. Sandwell's attention was drawn to a Swiss development involving drying by means of high pressure hot water circulated through the shells of drying cylinders. The water was said to be circulated from the center of the machine towards the edges, the rate of drying being controlled by the rate of circulation.

WILLIAM R. WEILL, who started his career in the industry at the now extinct Floriston, Calif., mill 35 years ago, and who toured coast mills many years as a salesman, is opening an office at 42 Davis St., San Francisco 11, (phone Exbrook 28716) as Pacific Coast representative of Louis De Jonge & Co., New York, and Springfield Coated Paper Corp., Camden, N. J.

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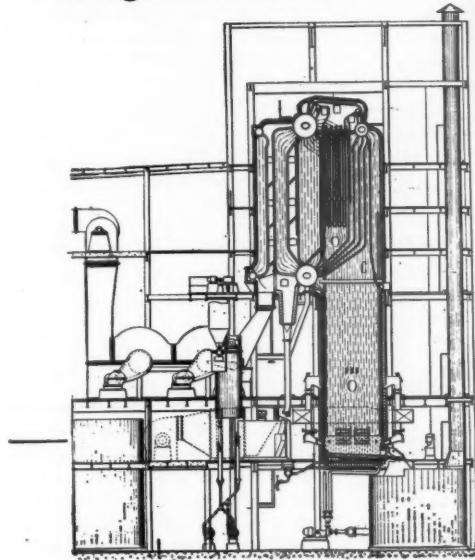
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RECOVERY UNIT
for
Brown Company's
Burgess Kraft Mill



The newly opened Burgess Kraft Mill at Berlin, N. H., is one of the most modern on this continent. This is not surprising, for the Brown Company, has been making kraft paper for more than 35 years.

C-E is proud to have furnished the Recovery Unit for this modern plant. The unit itself, pictured above, is designed to handle 680,000 pounds of black liquor solids every day, generating steam at 700 F and 450 psi. A C-E Recovery Unit of similar capacity has been in operation at their La Tuque Mill since 1943.

The reliability, economy and operating efficiency of the C-E Recovery Unit are well known. And, as you would expect, more and more mills are turning to C-E for both new installations and expansion of existing ones.

Pacific Coast: R. L. JOHNSON CO., Monadnock Bldg., San Francisco, and Petroleum Building, Los Angeles
SEPTEMBER, 1948

**COMBUSTION
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CANADA:
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C-E PRODUCTS FOR the paper industry include steam generating, fuel burning and related equipment; also many types of pressure vessels.

B-235

Personals

NORTHEAST



BENTON R. CANCELL, who has returned to St. Regis Paper Co. as General Mgr. of Printing, Publications and Converting Paper Division, with headquarters at Deferiet, N.Y. He was with the Powell River Company.

Cancell Heads Division Of St. Regis Paper Co.

Benton Russell Cancell, one of the top paper industry production executives in WPB during the war and for the past three years a vice president of Powell River Paper Co., will return to St. Regis Paper Co. as of Oct. 1 as general manager of the Printing, Publications and Converting Paper Division, with headquarters in Deferiet, N. Y., according to Lyman A. Beeman, vice president of St. Regis, who is in charge of the division. Mr. Cancell was with St. Regis before the war.

ALEXANDER CALDER, Jr., son of the president, has been elected a director of Union Bag & Paper Corp., New York, where he is assistant to Vice President Leonard Doyle, in charge of sales.

WALTER E. BREWER is district sales manager for Nopco's newly formed Eastern District, it is announced by T. A. Printon, vice-president, Industrial Division, Nopco Chemical Co., Harrison, N. J. The new district comprises territory from Metropolitan New York to Virginia.

JOHN P. HELPHREY, 288 Edgemere Dr., Greece, N. Y., has been appointed superintendent in the paper division, Eastman Kodak Co., Rochester 4, N. Y. Formerly assistant superintendent in the paper sensitizing department, he has been with Kodak since receiving his master's degree in 1929 from Washington State College. Willis H. Jennens and Dr. Richard V. Young have been appointed assistant superintendents in the paper sensitizing department.

Murray Bennett Resigns; Stebbins Advances Maxson

Murray H. Bennett of Watertown, N. Y., has resigned as a sales engineer for Stebbins Engineering and Manufacturing Co. and John E. Maxson has been promoted to that position, according to Carl F. Richter, president.

Mr. Bennett is a prominent member of the Superintendents Association and TAPPI and has been with Stebbins since 1927. His home is at Brownsville, N. Y., three miles from Watertown.

He was field supervisor for nine years in the United States and Canada. Since 1936, he was sales and development engineer in the Middle West and Northeast states.

Strathmore Gives Service Pins to 25

Twenty-five members of the Strathmore Paper Co. organization at its West Springfield and Woronoco Mills were given pins for 25 years' service at a banquet in Woronoco, Mass. Now 188, including 28 retired, have 25 year pins. George E. Williamson, president, presented pins to Charles S. Skop, Merville C. Herrick, Silvio S. Lopardo, Thomas A. Coughlin, George A. Fox, Edward L. Gardner, Peter L. Luccardi, Frank X. Langelier, Rocco Grocco, Mrs. Martha F. Bower, Charles A. Stafford, Emil J. Lambert, Clarence C. McCloud, Mrs. Josephine M. Barbieri, Frederick B. Metcalf, Sr., Mrs. Theresa D. Baiardi, Mrs. Florence M. Conger, Elton A. Parent, James B. Hosmer, Benjamin Bartnicki, Vernon A. Shattuck, Stanley F. Sliwa, Clarence B. Church, Mrs. Maud M. Prescott and Carl B. Barrus.

DR. J. K. MOORE, supervisor in the cellulose products division of the Hercules Powder Co. Experiment Station, Wilmington, Del., died July 13. He was Delaware's first polio fatality in 1948. He graduated from the University of Michigan in 1937. After working with the Westvaco Chlorine Products Corp. in Charlestown, W. Va., Dr. Moore joined Hercules in 1941.

CHARLES A. McCLOSKEY, district sales manager for Pennsylvania Salt Mfg. Co., New York, is in charge of a new consolidated office for East New York, New England and North New Jersey, as result of retirement of Frederick Rodenburgh, New York district manager.

JOSEPH V. H. HAYES has succeeded Eugene Warren, who retired, as treasurer of John A. Manning Paper Co., Green Island, Albany, N. Y.

R. H. BALL, of the New York office of Celanese Corp. of America, has been directing the work in connection with design of the alpha pulp mill to be built at Port Edward, B. C., by the subsidiary Columbia Cellulose Co.

ARCH CARSWELL, executive vice president of St. Regis Sales Corp., announces appointment of George P. Haberstein as eastern sales manager and Logan G. Hill as assistant eastern sales manager of the

Hammermill Merchants Meeting at Erie, Pa., Mill

The 35th Conference of Hammermill Agents was called at the Hammermill mill in Erie, Pa., Aug 25, 26 and 27. The visiting paper merchants inspected new buildings and equipment of the mill's seven million dollar postwar expansion program, described in an exclusive feature article in the August issue of **PULP & PAPER**.

New Book Available

A few copies of "Newsprint Paper Machine Operation," a book by W. G. MacNaughton, engineer of the Newsprint Service Bureau, New York City, are now available at \$4.00 per copy.

Mr. MacNaughton has had 40 years' experience in the North American paper industry in a wide variety of operations, and his book is a unique condensation of that experience reinforced by reports from many technical and practical operating men.

Washing at Brown Mill

The black liquor washing system introduced at Brown Company, Berlin, N. H., includes three 8 x 12' Oliver Ring-valve washers operating in series. All washers are installed at the same elevation and vacuum is primarily induced by the outflow of hot black liquor through large diameter vertical barometric legs. To minimize foaming in the system a Nash vacuum pump, with suitable inlet and outlet traps, assists in maintenance of desired vacuum by removing much of the air direct from an up-cast fitting on the washer filtrate outlet.

In addition to three 20 x 20' liquor (filtrate) service tanks, one for each washer, the system includes a 16' dia. x 40' high foam collecting tower. An Oliver mechanical foam breaker is used.

THE JAMES F. WALSH PAPER CORP., 437 11th Ave., New York, has purchased 54 acres in Wyandanch, Long Island, for the erection of a new plant for the manufacture of plastic-impregnated paper and combinations of acetate and cellophane with paper. About 500 will be employed in a new one-story structure of 250,000 square feet, according to James F. Walsh, president. The company will maintain its present property in Manhattan.

GENERAL DYESTUFF CORP., 435 Hudson St., New York 14, will send on request a new circular: GDC-292—"Preventol GD—Preventol GDC Liquid in the Paper Trade," which describes a new type of disinfectant for controlling fungi.

FREDERIC C. CLARK Associates, consulting engineers of New York, announces establishment of a Plant Cost Control Department under Miss Margaret Montgomery, a former associate of the late George A. Ware, who developed the service for the American Paper & Pulp Association. Since Mr. Ware's death, there have been many expressions of concern that the service which he had performed for so many years might come to an end.

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J-M Interlocked No. 253

Can't stain—can't unravel

This packing gives you long wear—no graphite to stain stock—no jackets or plaits to loosen. Its dense integral structure, impregnated with a special lubricant, withstands the toughest paper mill service. Every strand of long fibre asbestos extends into the packing and is securely *interlocked*. Braided square for greater contact on rod or plunger, J-M Interlocked No. 253 requires less gland pressure—another reason for its long life.

Use J-M Interlocked No. 253 on centrifugal and reciprocating pumps handling white water and stock. Pack Jordans and other types of stock refining equipment with No. 253. Available in ring or coil form.



J-M Clipper Seals

For better bearing protection

Use Johns-Manville Clipper Seals to protect bearings. They seal in oil, seal out dirt. One piece body is concentrically moulded for precision fit. Garter spring holds flexible lip in light, firm contact with shaft—sealing effectively, reducing wear. Non-metallic in construction, J-M Clipper Seals are highly resistant to most forms of corrosion.



Replacements are fewer when you use

J-M Friction Materials

For heavy papers use J-M No. 150 Brake Blocks. J-M Style No. 100 is recommended for tissue and similar papers.

On rewind brake requiring a flexible type of lining, use Style No. 510 Woven and Ground Lining.

Cut Maintenance Costs

with J-M's complete line of Packings and Friction Materials

Replacements are fewer when your packings and friction materials fit the application—as Johns-Manville products do.

J-M's complete line of non-graphited packings and gaskets are designed especially for use against the acid and alkaline liquors encountered in pulp and paper making. Both flexible and rigid styles of J-M Friction Materials possess unusually high heat resistance, mechanical strength and durability. These products reduce replacements, conserve power and help increase production. For further details and recommendations, write Johns-Manville, Box 290, New York 16, N. Y.



Johns-Manville

PRODUCTS FOR THE PAPER INDUSTRY

Personals

MIDDLE WEST



MILAN BOEX, who, as we reported last month, has been elected Vice President and General Mgr. of Northern Paper Mills, Green Bay, Wis.

Northern Mills New Head With Company 25 Years

Milan Boex, elected executive vice president and general manager, Northern Paper Mills, Green Bay, Wis., as we reported last month, has been with Northern 25 years, starting at the age of 19 in the converting department.

He joined the sales organization and worked a year throughout northern U. S. and then became Southern representative in Atlanta. In 1929 he was recalled to Green Bay to become assistant sales manager, and in 1936 became general sales manager. Since 1941 he has been assistant to the general manager in addition to heading sales.

Mr. Boex was born in Green Bay and is 44 years old. He succeeded the late A. B. Hansen as head of operations.

AMASA BROWN, accountant with Kalamazoo Vegetable Parchment Co., has been elected president of Parchment, Mich.'s school board. HAROLD DEWEERD, personal secretary to Ralph Hayward, president of KVP, is treasurer of the board.

MRS. EDWARD C. HILFERT, wife of the vice president and general manager of Riverside Paper Corp., Appleton, Wis., died suddenly recently at their home. A graduate of Lawrence College, she was Appleton's first woman bank teller. Her husband and four sisters and two brothers survive her.

ALBERT C. GILBERT'S daughter, Alice, was married Aug. 21 to John C. Davis of Neenah. Her father is president of Gilbert Paper Co. of Menasha, Wis.

D. K. BROWN, president of Neenah Paper Co., Neenah, Wis., was recently elected to his sixth term as national counsellor of the Neenah-Menasha Chamber of Commerce and will represent it in the U. S. C. of C. in Washington.

APPLETON COATED PAPER CO.'s picnic at Pierce Park, Appleton, was arranged this year by Ruby Schultz, Lois Helser, Len Hanstedt, Norman Eggert, Frank Sanders, Percy Menning, Henry Verbruggen and Mike Riedl.

They Put On Good Party for Kalamazoo Superintendents



HERE THE COMMITTEE which was responsible for a very successful Superintendents' Sports and Field Day recently at Gull Lake Country Club, Kalamazoo, Mich., and the retiring Chairman of the Michigan Supts. (left to right: PAUL W. BARTHOLOMEW, Committee Chairman and Tech. Director, Hawthorne Paper Co.; ROY W. HOLDEN, Stowe-Woodward Co., Inc., of Kalamazoo; LESTER J. SMITH, Mill Mgr., St. Regis Paper Co., Kalamazoo, and retiring Chairman WILLIAM H. ASTLE, Michigan Paper Co. of Plainwell, who presided at meeting. Mr. Astle was succeeded as Chairman of the Division by HERBERT B. JOHNSTON, Plant Engineer, Allied Paper Mills.

J. G. Rosebush, Wisconsin and Washington Mill Director, Dies

Judson G. Rosebush, a former director of Nekoosa-Edwards Paper Co. and one of the founders of Inland Empire Paper Co., at Millwood, Wash., died suddenly in the Northwestern railroad station cafeteria in Chicago on July 31. He lived at 117 No. Park Ave., Appleton, Wis., and was 68.

Mr. Rosebush taught economics at Lawrence College before World War I, was a college trustee from 1910 to 1934, and during that period was connected with Northern Paper Mills at Green Bay. He wrote two books, "The Ethics of Capitalism" and "Rethinking the YMCA." He was born in Alfred, N. Y.

FREDERICK B. CURTENIUS, secretary-treasurer of Kalamazoo Paper Co., has succeeded MERTON S. FOGARTY, chief engineer of Sutherland Paper Co., as president of the Kalamazoo Civic Players for 1948-1949, which—incidentally—is one of the very best civic theatrical groups in the country and puts on excellent plays with local talent, including a number in the paper industry circles.

KENNETH G. SELL, sales manager for the past 12 years of Detroit Sulphite Pulp & Paper Co., has been elected vice president in charge of sales, according to President G. N. Carleton.

JAMES F. DAUGHERTY, 68, of Otsego, Mich., traffic counsellor who handled many cases for Michigan paper mills before the interstate commerce commission and rate making bodies, died July 21. He was head of the Michigan Paper Mills Traffic Association for 12 years and past president of the Pulp & Paper Traffic League.

MRS. ROY J. SUND, whose husband is vice president of Marathon Corp., brought local honors to the family by winning the North Shore Golf Club ladies handicap tournament at Neenah, defeating Mrs. Richard Stafford in the final. One of her opponents was Mrs. George Maye, wife of the Appleton Wire Works vice president, who defaulted.

TEX COLLINS of the technical department, Thilmany Pulp & Paper Co., vacationed in his home state of Texas and came home with a cowboy shirt and new car.

W. H. GRAEBNER, president plant manager, Marathon Corp., Menasha, Wis., and Miss Nell Webster were recent speakers at the Marathon Secretaries Club. Mr. Graebner told about the big Marathon pulp mill in Canada, and Miss Webster told of Marathon's office methods, equipment and products when she first joined the company in 1906.

ELBERT MILHAM, chemist at the Watervliet Paper Co., Watervliet, Mich., suffered a broken leg and arm when the bicycle he was riding home from the mill was struck by an oil truck recently. He is 65 years old.

MAXWELL D. BARDEEN, president and general manager of Lee Paper Co., has ended his term as the first president of the one-year old Kalamazoo County Safety Council but will continue on the executive board. GLEN E. GRAHAM, vice president of Sutherland Paper Co., was elected first vice president of the council.

C. L. "DURK" DURKEE, sales engineer for D. J. Murray Manufacturing Co., Wausau, Wis., was on the Pacific Coast a few days in late July. He was much impressed by changes and improvements made since his last trip and regretted he did not have more time to renew old acquaintances.

JOHN L. ANKER, 28, whose father heads a Rhinelander home-town firm, is the new manager of the Oneida hotel in Rhinelander, Wis., which has been purchased by the Anker firm from Stevens Point interests.

EARLE L. RICH, treasurer-comptroller of the Fort Wayne Corrugated Paper Co., Fort Wayne, Ind., has been elected member of the Controllers Institute of America.

JOSEPH DEFFERDING, rotary man at the Telulah mill of Fox River Paper Corp., Appleton, Wis., died of a heart attack July 19, the day he returned to the mill from a vacation. He was 57.

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We move mountains

... both literally and figuratively!

In the literal sense, through our intimate world-wide affiliations—branch offices and personal representatives—this international organization moves mountains of paper and woodpulp from the forest to the ultimate user. In the figurative sense, as importers and exporters of these materials, Elof Hansson, Inc. "moves mountains" in serving both buyer and seller quickly and efficiently regardless of where they are located.

The organization of Elof Hansson maintains offices in:

- Gothenburg
- London
- Sao Paolo
- Rio De Janeiro
- Buenos Aires
- Mexico City
- Bombay
- Shanghai

and representatives in all key cities throughout the world!

ELOF HANSSON, INC.
220 EAST 42ND STREET
NEW YORK 17, N. Y.

Personals

PACIFIC COAST

McMaster Resigns Orr Post; Will Continue With Other Lines

Leonard McMaster, of the Pacific Bldg., Portland, Ore., who is sales representative for several supply companies on the Pacific Coast, is convalescing after a serious illness. He plans to cut down somewhat on his work in the future and announced that after Sept. 30 he will no longer represent Orr Felt & Blanket Co.

However, Mr. McMaster said that he will continue to represent Asten-Hill Mfg. Co., Chromium Corp. of America and American Wringer Co. He is now recovering after undergoing two operations and plans to resume some of his traveling.

JAMES R. ROBERTS recently became chief of products engineering section of Weyerhaeuser Development Department, Weyerhaeuser Timber Co., Longview, Wash. He formerly was bark products sales representative for Weyerhaeuser in the Midwest. Joining the company following the war as Detroit sales manager of industrial sales section of Wood Conversion Co.

LONGVIEW FIBRE CO. golf team is champion in the Longview, Wash., Twilight Golf League, made up of eight industrial and fraternal teams. "Longfibre" players include: (Captain) Boyd Wickwire, personnel manager; Carl Fahlstrom, assistant resident manager; W. J. Shelton, superintendent of pulp and paper manufacture; C. R. Adams, chief accountant; W. Q. Reiniger, assistant to chief accountant; Ken Hackett, chemist, and G. L. Holliman, shift chemist.

JAMES BRINKLEY, of Seattle, whose company represents Midwest-Fulton Machine Co. and Nash Engineering Co., sailed from New York with Mrs. Brinkley for a cruise to West Indies, Colombia and Venezuela ports during August.

EIGHTY MEMBERS of the supervisory, laboratory and office force of the Puget Sound Pulp & Timber Co. spent a recent evening at the Lake Whatcom home of Dan Robbins, head draftsman, enjoying speed boat rides, water skiing and swimming. Mrs. Luella Johnson, chemist, and Miss Lorraine Limbacher, secretary to General Superintendent Erik Ekholt, were in charge of arrangements.

IT WAS ERRONEOUSLY stated in our August issue (page 37) that G. D. Jenssen Co. of Watertown, N. J., is a Stebbins "auxiliary." The item correctly stated that Halvar Lundberg, director of G. D. Jenssen Co., has office space with A. S. Quinn, Stebbins vice president, in the Textile Tower, Seattle, but the former is neither an auxiliary or affiliated company of Stebbins.



FIFTY YEARS OF SERVICE in Crown Zellerbach Corp. and predecessor companies won gold pins and other honors for these men (left to right): J. Y. BARUH, Vice President, whose headquarters are at 433 So. Spring St., Los Angeles; CHARLES McKEEVER, Lubrication Supervisor at the big Camas, Wash., mill; LEXIE SMITH, Machine Room Shift Foreman at Camas, and CLARENCE E. BRUNER, Management Consultant for all mills and former Manager at West Linn, Ore. Another man who completed 50 years' service in the past year, not shown here, is J. B. LEWTHWAITE, Accountant, Portland, Ore., offices. Mr. Bruner began work in West Linn as an errand boy at the age of 14. Mr. Smith recalls that he started work in West Linn at the age of 14 for 6½ cents an hour, working a 12-hr. day. Mr. McKeever, the first man to complete 50 full years at Camas, went there from Texas with his parents on an "immigrant train," and he, too, started work at the age of 14.

PFC. DAVID MERRITT KAPHINGST, son of Merritt Kaphingst, pulp mill superintendent at Columbia River Paper Mills, and Mrs. Kaphingst, was a holder of both "expert" and sharpshooter" medals in the army, and took part in several invasions in the Pacific before he was killed on Luzon Island in 1945. Last month his body was returned to Shelton, Wash., for burial. Young Kaphingst was born in Appleton, Wis., and his grandfather, the late David B. Davies, was a pioneer of the western sulfite industry and long-time manager of the Rayonier mill at Shelton.

MELVILLE FULLER, beater engineer, and **FLOYD ERZ**, assistant office manager, of the Stockton, Calif., division of Fibreboard Products Inc., were recently awarded 20 years pins. Jack Fuller writes and takes pictures for a hobby and Mr. Erz is a horseman and gentleman farmer.

WILLARD GORDON, boss machine tender; **ALLEN HAHN**, office; **FRANCISCO CARILLO**, beaterman; **MERCED VIL-LANEUVA**, receiving department, and **JOE CARLSON**, plumber, received 25-year pins at Fibreboard's Stockton mill.

MIKE PAUL, personnel manager at Crown Zellerbach Corp., Camas, Wash., attended the 2-week Management and Personnel Management Conference held at California Institute of Technology, Pasadena, in July.

ROBERT ANDERSON, son of the late founder of the Puget Sound Pulp & Timber Co., Ossian Anderson, and presently in the engineering office of the Bellingham mill, is conducting classes at the Bellingham Yacht Club in the fine art of sailing. Bob owns a Lightning Class sail boat, and is frequently seen enjoying the waters surrounding the San Juans.

R. W. MORSCH, manager, Los Angeles office, J. O. Ross Engineering Corp., left in late May for Montreal to participate in the celebration of the 25th anniversary of the company's Canadian branch on June 3-8. Later Mr. Morsch visited Ross general offices at New York.



A. T. "Art" WALTON (left) has been appointed director of research of the Simpson Logging Co.'s laboratory of the woodfiber division, in Shelton, Wn., succeeding M. F. Smith, who resigned. **C. L. WALTON** (right), Art's brother, has succeeded him as woodfiber plant manager. He was formerly assistant plant superintendent. These changes were announced by C. J. Macke, woodfiber division manager and vice president.

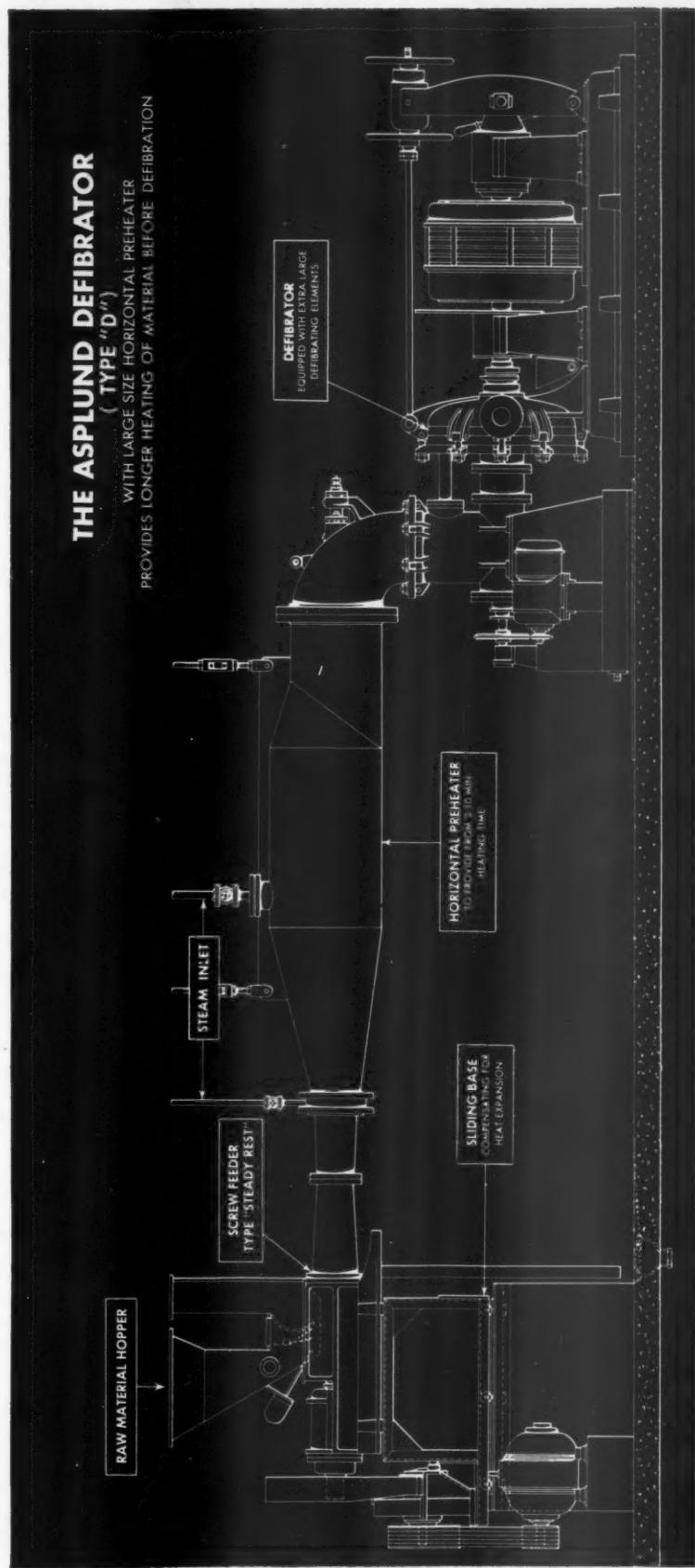
Other changes included promotion of **A. S. Viger**, special assistant to Mr. Macke; **Hebson Richards** to assistant superintendent.

RUSSELL DE LOPEZ, traffic manager, Puget Sound Pulp & Timber Co., has just returned from a month's journey to Southern California and Mexico, accompanied by Mrs. de Lopez. Shipping his car South, Mr. de Lopez enjoyed a sea trip to San Francisco and saw how other mills handled their traffic, as the M. S. "Argentina" called at several ports on the way down.

TOM STEWART, power and recovery superintendent for both the sulfite and new kraft mill of Weyerhaeuser Timber Co., in Longview, Wash., became a father-in-law July 16 when his daughter, Beryl, was married to a young Longview oil company official.

ORVILLE R. MILLER, of Portland, Ore., president of Deep River Timber Co., vice president of Wauna Lumber Co. and twice president of the West Coast Lumbermen's Association, died suddenly Aug. 7. He was widely known in pulp and paper circles.

DALE HOLCOMB, of Fibreboard Products, Port Angeles, made a three weeks' motor trip to Illinois recently.



SEPTEMBER, 1948

The Defibrator produces superior pulp for wall-board, hardboard, insulating board and roofing felt from all kinds of chipped wood or other fibrous ligno-cellulose materials such as bagasse or straw. The process can be controlled to produce or duplicate any desired degree of freeness or fineness of fibre. Pulp is homogeneous with all fibres intact, but well separated. Yield is high and power costs are low.

Sold exclusively in the United States by

AMERICAN DEFIBRATOR, Inc.

CHRYSLER BLDG., NEW YORK 17, N. Y.
West Coast
A. H. LUNDBERG, TEXTILE TOWER, SEATTLE, WASH.

Persimmons

SOUTH

A. L. THRIFT, longtime employee of International Paper Co., Georgetown, S. C., where for many years he has been president of the union local, is a candidate for the House of Representatives from that district.

HARRY H. SAUNDERS, production manager for St. Joe Paper Co., Port St. Joe, Fla., is happy to announce a new, modern, up-to-date hotel and dining room there for their visitors. The new enterprise, the Hotel St. Joe, is operated by Mr. and Mrs. Roy C. Hallman. It replaces the hotel that burned prior to World War II.

SIDNEY D. ARANT has been promoted to superintendent of the paper mill at Hollingsworth & Whitney, Mobile, Ala. He has been with the mill since it was constructed in 1940. Previous to that he was with International Paper Co. at Bastrop, La. He succeeds F. A. Jensen, who went to St. Marys Kraft, St. Marys, Ga.

INDUSTRY SALESMEN who have cause to travel between Crossett Paper Mills (Crossett, Ark.) and International Paper Co.'s mills (Bastrop, La.) will be pleased to learn that hard surfacing of that stretch of highway is now assured.

WALTER T. SHELDON has been named general sales manager of the container division of St. Joe Paper Co., Port St. Joe, Fla. He will make his headquarters at the company's South Hackensack, N. J., plant.

VERNON C. HILL of Atmore, Ala., is now covering mills in the South for Oliver United Filters, Inc. He is a graduate of Alabama Polytechnic Institute, Auburn, Ala.



C. E. JACKSON (left), a papermaker at the big Savannah mill since '36, who has been promoted to Paper Mill Supt. of Union Bag's five-machine mill in that city. He succeeds Ray Almond, who went to Brown Co., Berlin, N. H., as Gen. Supt. Mr. Jackson was at West Monroe, La. (Brown Paper Mill Co.) for five years before joining Union Bag.

J. J. THOMPSON (right), promoted to Pulp Mill Supt. at Southland Paper Mills, Lufkin, Tex., where he has served since '38. Starting at West Monroe, La., in 1924, he worked at mills in Hedge, La., Jacksonville, Fla., and St. Marys, Ga.



ADAM TRIESCHMANN, former Manager of the Crossett Industries at Crossett, Ark., and the engraved silver tray which was presented to him in recognition of 50 years of service to the Crossett-Watzek-Gates organization, which operates the Crossett Paper Mills, Crossett Chemical Co., and lumber mills at Crossett, Fordyce, Ark., and Lockhart, Ala.

E. C. CROSSETT, President, made the presentation at a dinner July 15 at the Racquet Club, Chicago. J. W. Watzek, Jr., presented 50 red roses to Mrs. Trieschmann. Her husband started as Sales Manager at Fordyce, in 1898 and they were married there. From 1902 to 1925, he was Sales Manager, Assistant Manager and then Manager and Director of the Crossett plants. He has been in the Chicago office of Crossett-Watzek-Gates since 1925 and also is President of the Ashley, Drew & Northern Railway.

Dallas Mill Builds For No. 3 Board Machine

A third board machine is being added by Fleming & Sons, Inc., Dallas, Texas. A new building to house an additional 7-cylinder 132-inch (120-inch trim) board machine is now in process of construction.

This mill produces combination box board and light chip board. The present installations includes a 61-ton Bagley & Sewall Fourdrinier, 110-inch trim, and a Beloit 6-cylinder, 95-ton, 114-inch trim machine.

Power generating capacity will be upped to 6000 HP. The new machine will have a drive furnished by Reliance Electric & Mfg. Co.

Executive personnel are: John G. Fleming, vice president and sales manager; E. T. Fleming, Jr., vice president and production manager; J. B. Fleming, secretary and traffic manager; Walter L. Fleming, vice president; H. A. Kneare, general superintendent; Virgil Williams, chief engineer, and A. D. Edwards, assistant chief engineer.

Instrument Course At Texas A. & M.

Agricultural and Mechanical College of Texas, at College Station, Texas, offers a seminar course on "Instrumentation for the Process Industries," on Oct. 26, 27 and 28. Anyone is eligible to take the course on payment of the \$5.00 registration fee; pre-registration by mail is encouraged. Rooms and meals will be available. Write Prof. P. G. Murdoch, Chemical Engineering Dept., Texas A. & M. College, College Station, Tex.

J. D. DAILEY, pulp mill superintendent at the Red Rock kraft mill of Brompton Pulp & Paper Co. in Ontario, planned to leave there September 1 to become superintendent at the new Coosa River newsprint and sulfate pulp mill, in Alabama, which will be operated by Kimberly-Clark Corp.

Piling Driven for New Alabama Mill

Construction work on the new Coosa River Newsprint Co. at Childersburg, Ala., under Kimberly-Clark management, started May 5, when first piling were driven. Included in immediate construction plans are a 24-room hotel to accommodate company personnel during construction and visitors afterwards, and the general office building.

Supervisory personnel announced to date by Kimberly-Clark include: A. G. Wakeman, vice president and general manager; W. E. Hornbeck, resident mill manager; John Raeburn, wood manager; Clarence Lande, plant engineer; Howard Neuerbauer, office manager; W. W. Cross, newsprint sales manager; Frank Farver, comptroller; and M. D. Behnke, general purchasing agent.

The general office in the Protective Life building, Birmingham, Ala., 35 miles from the mill site, will be continued at least until accommodations are completed at Childersburg.

Rubberoid Improves New Dallas Mills

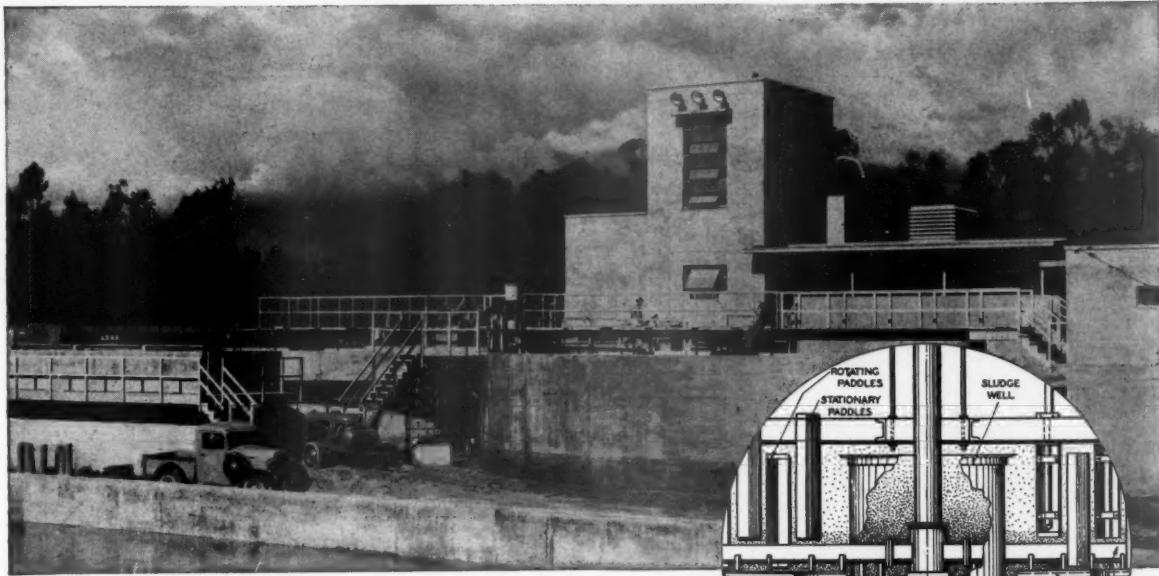
Renovation of both the paper and asphalt mills at Dallas, Texas, acquired from Longhorn Roofing Products, Inc., by Rubberoid Corp. in December, 1946, has been effected with the attainment of greater efficiency both as to production and quality.

This mill has become one of the string of strategically located production-distribution centers established by Rubberoid which is a pioneer company in this field, having been first established in Bound Brook, New Jersey, in 1886.

E. J. O'Leary is general manager at the plant and Camille Metzger is production superintendent. Charles B. Lundin, who represented the company in New Orleans for a long period of years is in charge of sales from the Dallas headquarters.

A must for successful water treatment...

POSITIVE SLUDGE REMOVAL



obtainable with the

DORRCO HYDRO-TREATOR

Positive mechanical removal of settled solids . . . an essential of high rate water treatment . . . is assured by Dorrco Hydro-Treator design.

HERE'S HOW IT WORKS

As feed is distributed, heavy, gritty solids quickly settle to the floor of the Flocculation compartment and are raked inward to the central discharge cone. Light, flocculated solids drift into the sludge well, and are thickened by the picket scrapers as they settle to the discharge cone. *In both cases, rake and scraper action is positive . . . forcing all solids to one central point for discharge.*

EFFECTIVE TREATMENT

Softening, color or turbidity removal can be effectively accomplished in the Hydro-Treator because of such features as uniform feed distribution, uniform flocculation conditions and zoned sludged thickening.

LOW INSTALLATION AND OPERATING COSTS

First cost is held to a minimum by simplicity of Hydro-Treator tank and mechanism design. Treatment cost is low because Hydro-Treator mechanism design promotes fast chemical reaction without interference among the three treatment zones.

FOR FURTHER INFORMATION

Dorrco Hydro-Treators are available in sizes ranging from 10 ft. to 100 ft. in diameter. A Dorr engineer will gladly supply more detailed information.

RESEARCH ■ ENGINEERING ■ EQUIPMENT ■ **D O R R**

SEPTEMBER, 1948

DORR
THE DORR COMPANY, ENGINEERS
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ASSOCIATES AND REPRESENTATIVES
Dorr Technical Services and Equipment Are Also Available Through Associated Companies and Representatives in the Principal Cities of the World.
Names and Addresses on Request.

Personals

CANADA

Changes in Powell River

M. J. Foley, executive vice president of Powell River Co., Vancouver, B. C., has assumed direct charge of production for that company as a result of B. R. Cancell's resignation to join St. Regis Paper Co.

Other changes by Powell River Co. follows:

I. H. Andrews, director of research who in the past has made his headquarters at Powell River, B. C., has joined the executive staff in the Vancouver office.

Russell M. Cooper continues as resident manager in charge of operations at Powell River.

H. Urquhart, for several years with the company at Powell River, has been appointed assistant to the resident manager.

ARTHUR A. BERNHARDT, formerly of Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich., has been appointed chemist and technical supervisor at the KVP Co. mill, Espanola, Ont.

WILLIAM FORRESTER has been appointed employment supervisor for Marathon Paper Mills of Canada, succeeding Grant Ward, resigned.

L. G. HARRIS, formerly of Brompton Pulp & Paper Co. at Red Rock, Ont., and latterly with Bloedel, Stewart & Welch, Ltd., at Port Alberni, B. C., has joined the staff of Howard Simons, designing the H. R. MacMillan Export Co.'s pulp mill, in Vancouver, B. C.

JOHN EVANS has resigned as chemist for Sorg Pulp Co. at Port Mellon, B. C. He was formerly technical assistant to Douglas Jones, engineer-secretary of the Canadian Pulp and Paper Association's technical section, and a member of the technical staff of Brompton Pulp & Paper Co. at Red Rock, Ont.

PHILIP GROUCHY, general manager, Anglo-Newfoundland Development Co., was named as one of Newfoundland's delegates to a conference in Ottawa to discuss terms of confederation between Canada and Newfoundland.

H. J. MCKENZIE, manager of Export Sales Co., representing Powell River Co. and Pacific Mills, Ltd., in the Oriental market, has returned from a tour of Japan and China.

V. R. COUDERT, **E. C. BARRETT** and **R. G. McHUGH** represented the New York office at a recent conference in Vancouver, B. C., of executives of Powell River Sales Corp. Fred Ward represented Los Angeles; Don Jeffries, San Francisco, and Anson Brooks, Terry Holloran and Elmer Lee, Seattle.



SIXTY SUCCESSFUL YEARS in the pulp and paper industry were recently completed by J. J. Herb, Chairman of the Board, Westminster Paper Co., New Westminster, B. C., and Pacific Coast Paper Mills, Bellingham, Wash. Here is Mr. Herb with his two sons, Elmer M. (left), President of the New Westminster company, and F. J., President of the Bellingham company, holding silver tray, engraved with pictures of the two plants, presented to him at banquet in Vancouver, B. C., by directors and key employees. He was born in Kaukauna, Wis., was superintendent at Thilmany and built the Interlake Tissue Mills at Merriton, Ont., before going to the Coast.

H. HUNTER, field supervisor, and **A. R. WEBB**, superintendent of the Vancouver converting plant, were among those honored at the service pin presentation for Pacific Mills, Ltd., employees in Vancouver, B. C., recently. Mr. Webb has been with the company 25 years; Mr. Hunter five years.

T. B. JACKSON, manager of the logging division, Pacific Mills, Ltd., recently received in behalf of the company the British Columbia Workmen's Compensation Board trophy won by the first aid team at Sandspit, Queen Charlotte Islands.

E. P. BURCHETT, for the past three years head of the forest division, B. C. Pulp & Paper Co., Vancouver, B. C., has been appointed logging manager of Timberland Lumber Co., New Westminster, B. C. Formerly with Rounds-Burchett Logging Co., Burchett was overseas during the war with the Canadian Forestry Corps.

HUBERT BIERMANS, former president and managing director of Belgo-Canadian Paper Co., now a part of the Consolidated Paper organization, was honored recently at a reception by the University of Louvain.

PAUL HSI, graduate of Nanking University, China, who has been serving in various mill departments of Powell River Co., left for the eastern mills to continue his practical study of the North American paper industry.

STANLEY RINGHEIM, purchasing agent, and **WILBUR LOWNDES**, assistant chief engineer, both of Central Engineering, Crown Zellerbach Corp., Seattle, are on a several weeks' tour of Eastern Canada to see some of the new papermaking installations and modernization of mills in that area.

WHEN J. J. HERB, chairman of both Westminster Paper Co. and Pacific Coast Paper Mills of Washington, received an engraved tray at a banquet in the Vancouver Hotel, Vancouver, B. C., in honor of his recent 60th anniversary in the industry, five new members were inducted in the WEPACO Club, for 20 years' service in the Westminster mill. They were Len Cutting, Lester Wilson, William Houghton, Walter Ross and William Shields.

HAROLD R. DAVIDSON, formerly of Great Lakes Paper Co., is now vice-president of the Buckman Laboratories of Canada in Montreal.

Halifax Co. Increases Pulp Output Over 200 Tons

Halifax Paper Co., Roanoke Rapids, N. C., in July started up a new Kamyr wet machine which increases its kraft pulp production from 200 to 300 tons per day.

Modernization at the plant has cost well over a million dollars. Other improvements include a Combustion Engineering Co. recovery unit. Washing and screening facilities are being revamped. The entire program will take a year to complete.

Halifax Paper Co. is a subsidiary of Albemarle Paper Co., Richmond, Va.

Consolidated of Canada Increases News Output

By speeding up machines already installed Consolidated Paper Corp. in Canada, was able to increase newsprint capacity last year by 135 tons a day, according to President G. M. Hobart, who addressed the annual meeting in Montreal recently.

This cost the company \$380,000, or \$2,800 per ton of daily capacity, but new construction to attain the same result in production would cost \$9,000,000, or \$66,750 per daily ton capacity, said Mr. Hobart.

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"Forests comprise a crop which can be made to provide a countless number of jobs and a degree of prosperity never before known in the South."—The Southern Association of Science and Industry.

FIRE PROTECTION IN FLORIDA

What an owner of more than 800,000 acres of southern forest land does in effectuating an intensive fire protection policy has been demonstrated by the St. Joe Paper Co., whose modern kraft mill is located on the Gulf of Mexico's shore at Port St. Joe, Fla. The St. Joe mill and land holdings in West Florida stand as a testimonial to the late Alfred I. duPont who years ago, viewing the economic

stagnation that followed cutting of virgin timber stands, had the vision of an area re-vitalized by permanent industry with benefit alike to the public and to private investment.

The first portion of the company's lands were acquired in 1925 but they have been vastly increased since the original acquisition. The stand is natural longleaf and slash pine type and also a large area of

southern hardwood. Most of the virgin stand has been gone for over two decades. The saw timber cutting is done now by the St. Joe Lumber and Export Co.

The first lands were put under state fire protection in 1933. The results of this fire protection became manifest through increases in young pine stands of from 50% to 75%, a demonstration which re-

ST. JOE PAPER CO. WOODLANDS OPERATIONS.—1. An old fire access put down on St. James Island by the CCC has demonstrated their worth. This area was cut for pulpwood in 1932-33. The stand here is natural regrowth with "cat faces" taken out. The WILLYS jeep shown here is a favored vehicle. This access was used by Camp Gordon Johnson trainees.

2. A CATERPILLAR D-8 drawn 12-yard LE TOURNEAU Carry-All builds up the fire access break across a low spot. There is a borrow pit at each end of the run. 3. An ALLIS-CHALMERS drawn LOWTHER seedling planter. At noon, this crew and equipment had put in 10 acres of seedlings spaced 8x8 (860 per acre) in old

Seminole Plantation. Unless planted to pine, low value scrub oak would "take over."

4. One way to stop a southern woods' fire is to plow a ring around it to stop spreading. Here a CATERPILLAR D-4 drawing a MATHIS (Settemire) fire suppression plow for a quick run to a blaze is being loaded by an International KB-6 two-way equipped radio transport (transport is just out of picture on right).

5. Finishing of the surface may be done, as here, with CATERPILLAR D-8 drawn hand-operated Caterpillar Grader.



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40% MORE WOOD PER MAN with CARCO winches, hoists, arches and sulkies

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—and 40% more wood per man is only a beginning. A CARCO Sulky-Winch team will *triple* log output over ground skidding methods. A tractor mounted CARCO Hoist, high leading from a portable spar, can profitably cold-deck pulp logs from steep sides or through standing timber. CARCO equipment and methods have been paying off for loggers for forty years.

● **THE CARCO JUNIOR SULKY AND "S" WINCH TEAM** makes arch logging possible for small tractors from 15 to 30 HP. For fast delivery of small loads or where logs are scattered, this midget Sulky and 6,000-lb.-pull Winch brings in clean logs.

● **THE CARCO STANDARD SULKY AND "E" WINCH TEAM** for tractors to 45 HP arches larger loads of small logs. If traction is poor due to rain, a Winch-Sulky rig keeps you in the woods longer. To haul over a slick or bog, drop the load, go ahead to firm ground, paying out line. Then winch up load and proceed.

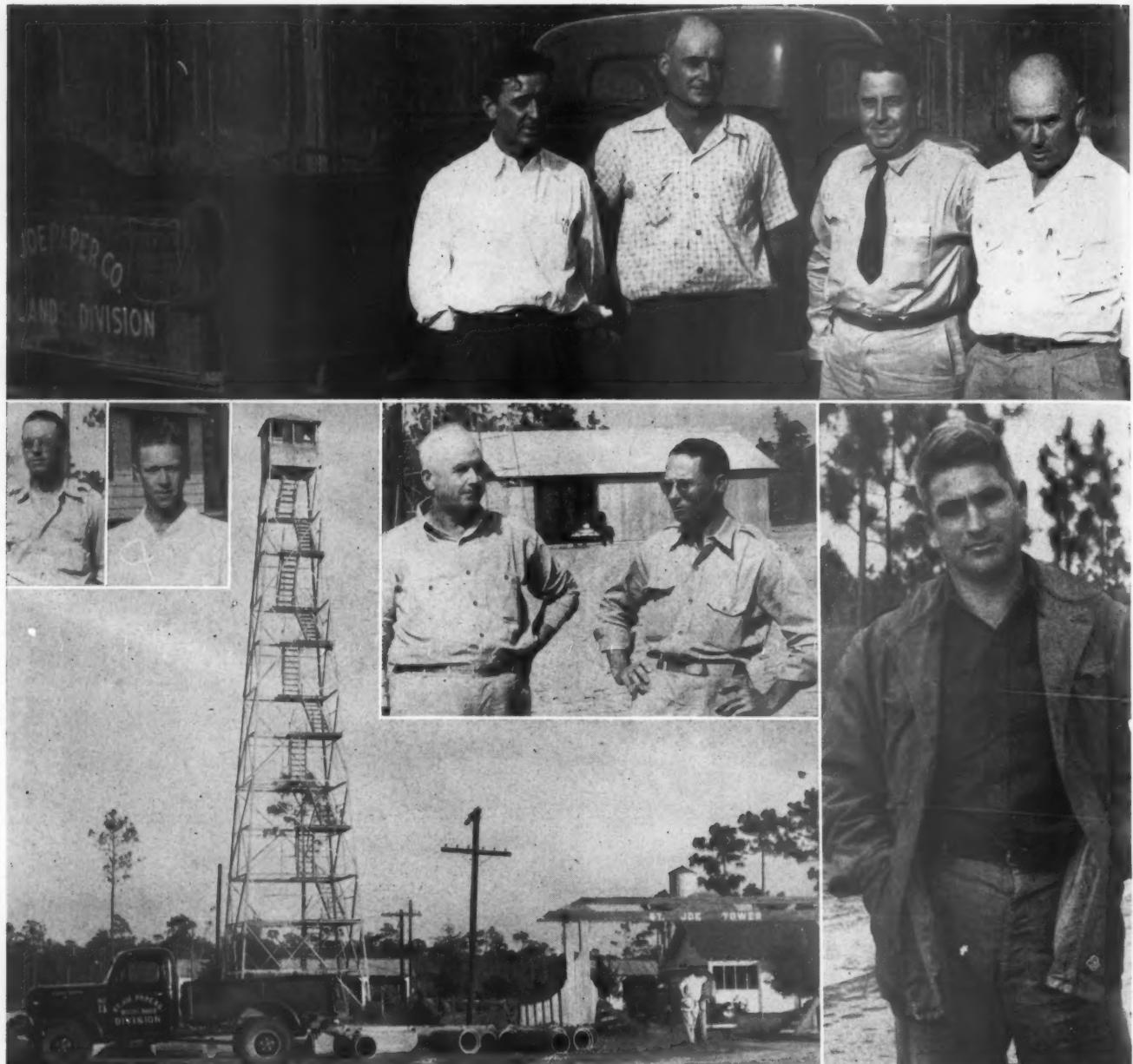
● **A CARCO "R" HOIST** equipped tractor coupled to a portable spar can go into a heavy stand or rough terrain where arching is impractical and do a quick job of cold-decking. Many loggers are now producing pulpwood profits from otherwise waste trees by pre-logging with a mobile spar.

● **THERE IS A CARCO WINCH OR HOIST FOR NEARLY EVERY CRAWLER TRACTOR EVER MADE AND AN ARCH OR SULKY FOR EVERY LOGGING JOB.**



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ST. JOE'S MEN AND EQUIPMENT: (Top) Standing in front of the DODGE Power Wagon, which can go anywhere in the woods, are (left to right) V. R. St. James Island unit; EDWIN B. SCHULER, Unit Woodlands Supt.; ARTHUR SHIVER, H. G. CONRAD; W. K. SETTLEMIRE, Chief of Construction; ROBERT C. RICH, Southwood Unit Chief; HUGH WHITE, West Bay Unit Chief. Bottom scene equipment—a tank of water, a Panama pump, a 2-way Motorola radio. Port St. Joe.

sulted in a more intensified program starting in 1945. Planting of pine seedlings on a substantial scale was initiated to augment natural development of the young stand.

With its successful experience behind it, the company once again stepped up its fire protection. Its wood procurement, land management, and fire protection organization were all merged into a Woodlands Division under Robert C. Brent, Jr., who had directed pulpwood purchases and represented the company in the Southern Pulpwood Conservation Association.

In its intensified and more ambitious program initiated Jan. 1, 1947, the bulk of the St. Joe lands were divided into five district units along natural geographical

lines. Each district was placed in charge of an experienced forester who has a competent working force backed by a central mechanical and construction service. Each district organization functions in close harmony with Florida Forest Service's fire control system.

As an integrating key to the program, air photos of the entire land holdings were made for the company by Abrams Aerial Survey Corp. of Lansing, Mich., early in 1947. This aerial survey provides a complete stereoscopic coverage of the St. Joe property. Each district forester has a set of air photos of his district. His equipment includes the stereoscope and a vertical sketchmaster from Harrison C. Ryker, Inc., of Oakland, Calif.

The central office of the Woodlands

Division in Tallahassee, Fla., has a complete set of aerial photos of all five districts for ready reference.

The aerial photos are used in the location of fire access breaks, drainage planning, timber cruising, and for access and fire break road improvement. Practical application of aerial photos to ground conditions is through making a spot cruise of the stand on a selected spot; then comparison with the photo. This technique results in development of close judgment in standing timber estimates.

In planning the program, the land was laid out in blocks of from 5,000 to 10,000 acres according to natural factors, then split into smaller control units by fire breaks. Measured in terms of practicality, these fire breaks must be completely con-

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tinuous and never at any time carry vegetative growth that might provide a means whereby fire could creep from one side to another. To this end, they must be worked with equipment. This, in turn, means that the fire break itself must be carried across streams, savannas, and other low places in a manner providing not only the interruption to fire spread but so constituted that equipment for their maintenance and fire fighting may reach all parts of the forest network. Because they must primarily be a fire break but capable of providing a means for maintenance they have come to be termed "fire access breaks." In fire suppression emergencies, equipment uses these fire breaks to reach a blaze.

Landing holdings of the southern pulp and paper industry are principally in non-mountainous areas where blazes do not involve crown fires except on rare occasions. Instead, running grass fires kill seedlings and small pine trees, preventing re-growth. Larger trees suffer retardation of growth or damage resulting in subsequent degrade from red heart. The modern concept of forest fire protection in the South is to put in as much fire break as economically feasible, using natural stops where available; watch for fires; and suppress the blazes with plowed rings and fine water spray from force pumps.

Fire access breaks in the St. Joe lands are in three widths—35, 21 or 12 feet—depending upon whether classified as primary, secondary or minor. The wider types have an advantage in that they do not grow over so rapidly.

The St. Joe lands embrace every phase of Florida topography, from the rolling uplands with well developed water channels, to the wet sandy flats or "savannas" found in some sections near the Gulf's edge. Regardless of the type, there exists a vital necessity for the fire access break. In the winter months when the grass is dead, the briefest dry spell can make it possible for fire to sweep through, not only killing off young pine growth in the savannas but also in the intervening low ridges.

Transportation facilities are unusual in that three of the forestry districts, West Bay, St. Joe and St. James Island, are crossed from end to end by the Intra-coastal Canal, while the fourth district, Southwood Unit, is located adjacent to the St. Marks River, which is at the present time eastern terminal of the Intra-coastal Canal, thus providing barge delivery to the mill from a large portion of the land. Two of the districts, Hosford and St. Joe, are crossed by the Apalachicola Northern Railroad, which is a subsidiary of St. Joe Paper Co., and all of these areas are traversed by good, hard-surfaced roads.

Incidentally, being a "large" land owner the company has been expected to donate rights-of-ways for public undertakings, such as canals, public highways, etc., which it has to the total of over 14,000 acres.

No part of the company's forest land holdings are more than 125 miles from the paper mill at Port St. Joe.

The lands were cruised in 1941-42, since

which time an additional 350,000 acres have been acquired.

All planting since CCC Camp days has been mostly to slash pine, which is native to and thrives on these lands. A million seedlings were ordered for the 1947 planting season.

All work centers are connected with long distance telephone service.

Description of Five Units

The "St. Joe" unit, with headquarters in Port St. Joe, contains 265,000 acres of land situated in Gulf county and Calhoun county, with small portions in Franklin and Bay counties. The district is in charge of H. R. Maige, the company's senior forester and previously a veteran of the Florida Forest Service.

The St. James Island unit, whose 90,000 acres include lands that were under war-lease to the Government for camp as part of Camp Gordon Johnson is in charge of Elmore Godfrey, a Florida School of Forestry graduate and ex-army lieutenant. This unit was cut for pulpwood in 1932-33. It was the location of a CCC Camp, and the fire access breaks built at that time proved a factor in selection for Army camp site. For amphibious training, it had easy sloping beaches, sandy soil, palms, palmetto and rugged ground.

Hosford unit—Headquarters at Hosford, Florida, contains 135,000 acres in Gadsden and Liberty counties. Its forester is Ben S. Lovingood, who, until recently, was with the U. S. Forest Service and is a Navy veteran.

West Bay unit lands comprised of 165,000 acres, are in Bay and Walton counties, with headquarters at the village of West Bay, five miles from the Gulf shoreline. Its chief is Hugh White, who came to St. Joe via the University of Georgia, Georgia Forest Service, and as a (Lt.) pilot in the China-Burma area.

Southwood unit, with 145,000 acres in Leon, Jefferson and Wakulla counties, has just been brought into the company's intensified forestry program and has headquarters at Newport, Florida. Its forester is Arthur A. Rich, graduate of the University of Florida Forestry School and former employee of the Florida Forest Service prior to the war. He came to St. Joe from being Col. Rich in the Army and was previously in charge of the Hosford unit.

These five units include approximately 800,000 acres of lands with other scattered holdings bringing the total to well above 800,000 acres.

There is a state fire tower in each of the units. The company's payments to the state range from 8c to 13c per acre per year. For this the state gives tower service, fire suppression, and some maintenance on fire access breaks. The company has a similar matching organization to function closely with the state service. In addition, the company furnishes a large part of the fire protection equipment for the units, plus fire access breaks, plows, tractors, etc.

Early in 1948, four of the units (St. Joe, West Bay, St. James Island and Hosford) had been furnished with radio communication. The company owned trucks are

equipped with receiver; not two-way.

Each district unit has its office, ranger's residence, garage and equipment sheds. Certain equipment of frequent use or for emergency call is housed there.

Heavy Equipment

The equipment used by the company in actual fire suppression work includes four Chevrolet transport trucks, six Caterpillar D-4 tractors, six suppression plows of which fire are Mathis and one Atlas, four Dodge Power Wagons equipped with water tanks and Panama pumps, and two Willys jeeps.

The heavy construction work (i.e. fire access breaks and bridges) is effected by a special section of the Woodlands Division that moves from one district to another as the program development requires. This section is under the direction of W. K. Settlemire, who developed the first suppression plow during the time he was with the Florida Forest Service.

For the construction of the miles of fire access breaks the company has eight Caterpillar D-8 tractors with stump and angle dozers (these carry the customary Hyster winch and Twin Disc clutch), four Caterpillar D-7 tractors, three Caterpillar D-6 tractors, four dirt movers and pans, and four of the 6-wheel drive power graders (Road Patrols) of which two are Allis-Chalmers, one Caterpillar, and one Warco.

Other items in the heavy equipment department include one Northwest $\frac{3}{4}$ yard dragline; one RD-7 Hystaway $\frac{1}{2}$ yard dragline; three wheel graders of which one is Caterpillar and one Gallion; a 3-ton Mack transport truck to move the equipment from one district to another and to work scenes; three 4-wheel drive Equipment Service Trucks; ten Chevrolet trucks, ranging from half-ton to $1\frac{1}{2}$ ton pick-ups for transporting men and materials; one Case tractor with mowing machine; one Chevrolet $1\frac{1}{2}$ ton bridge maintenance truck.

The company maintains a complete repair shop and stores at Port St. Joe; with a field repair shop in each other district headquarters.

In the extremely wet areas, the practice is to come in with a dozer mounted Caterpillar D-7 to clear timber and stumps from the right of way. The division of task here is that the district forest (company) supervisor locates the right of way and the construction division puts the access in.

The ditch lines are then plowed with a 2-disc fire line plow, with the same equipment used to plow drain lines from the right of way to adjacent drainage ways to remove surplus water.

The next treatment varies with actual conditions. A drag line is used on extreme wet areas where the tractor equipment cannot function economically. Here the $\frac{3}{4}$ yard Northwest dragline may be used; or the $\frac{1}{2}$ yard Caterpillar D-7 Hystaway mounted tractor. Under most conditions the crawler tractor drawn field (hand) grader is used to build up the access travel bed.

The D-6 equipped with towing winch is favored. Here the tractor is cut loose from

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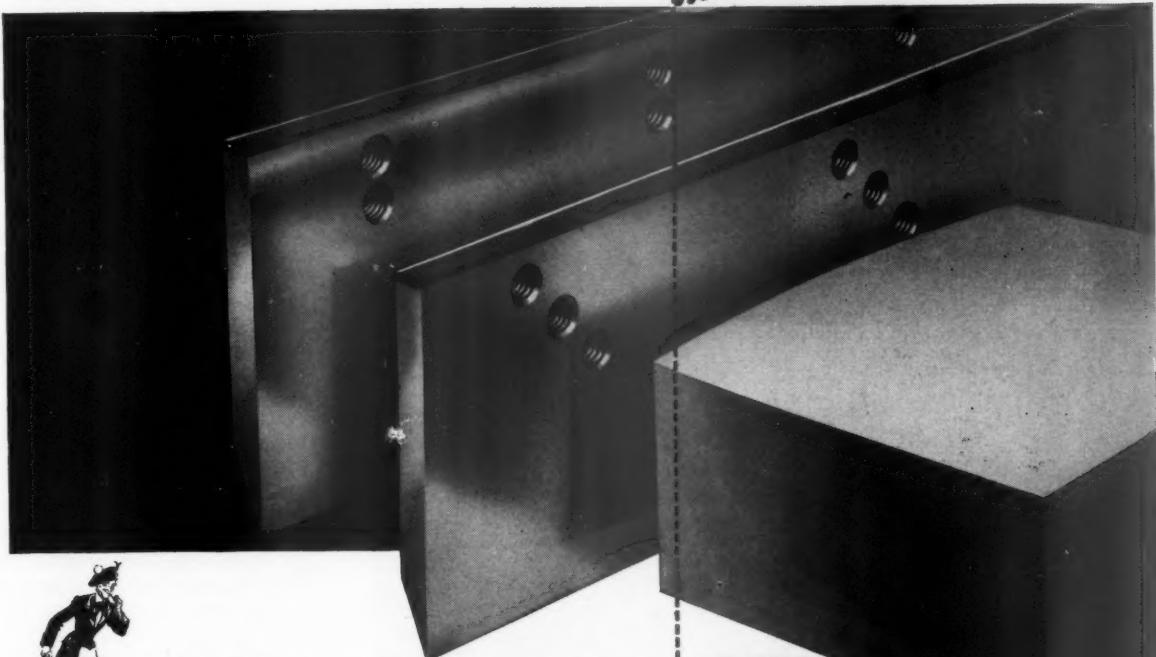
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ON ST. JOE PAPER CO. PROPERTY.—(Top) An Allis-Chalmers Road-Patrol (A-D Allis Diesel motor) I-F Series does some blading on a deep loose sand fire access break. (Lower) This "grease rack" type of bridge structure for small streams can pass the heaviest equipment, taking loads to 25 tons. In getting away from decking the first point of bridge decay is avoided. Piling for this structure were jetted with a HARDEE fire pump.

the grader and driven forward to good ground and the grader is winched through the bog to good dirt.

Where the terrain is largely flat, with no hill from which to bulldoze or grade dirt onto a fill, a Caterpillar D-8 tractor is used to pull a 12-yard capacity Le-Tourneau Carry-All. In using this equipment, a borrow pit is located at each side of the low spot where fill is required and each turn-around means a load instead of one full and one empty run.

Headquarters at Port St. Joe district are most elaborate comprising three acres in all under fence. Accommodations here

include a residence for the mechanic; a combined shop, equipment shed and storage for parts; a transport truck and motor grader shed; a combined truck repair, welding and blacksmith shop; and five small structures for special purpose structures. Diesel fuel is stored in a tank here, but gasoline is drawn from regular outside service station sources.

A stock is kept here of parts in most frequent demand for repair parts.

The shop at headquarters not only keeps the equipment in repair but also makes all the gates used in the St. Joe operations. They are usually welded.

Much used gates are made with roller bearings with a top collar to swing easily but not blow with the wind.

In the area adjacent to St. Joe, accessible from the highway, the company is testing out possible development of the savanna (flat, wet, untimbered land) for grazing as against use for trees. Here the sections drained by the highway ditches have caught pine tree seeds with a good survival. It is felt that drainage, if not too costly, would result in making these acres productive. However, one of the small sections has been drained, fenced, treated with 400 pounds of phosphate (to counteract acidity) and planted to Dutch (white) clover and carpet grass. Should the test prove the lands suitable for development into improved pasture, this will be done and the acreage leased out for grazing.

As has been reported from other sections of the South, the work performed by the CCC Camps has left its successful mark in four areas in which these were located. The fire breaks are still there although in many cases the bridges across the small streams need to be replaced. Plantings effected by CCC are making a fine showing. The CCC fire access breaks on St. James Island served the Army very usefully in making it possible for trainees and equipment to be carried into and out of selected areas rapidly.

The Hosford unit of St. Joe's extensive forest land holdings embraces a greater proportion of high land, and its management presents characteristics more common to other non-coastal areas. The water channels are more clearly defined, generally with live streams. This calls for definite treatment in carrying the fire access break from one side of the waterway to another.

Where the stream is minor, a culvert is put in. If this work is properly performed, maintenance will be slight. Plenty of dirt is moved in.

On good live streams, a strongly constructed bridge with no decking is put in, the completed structure resembling a drive-on grease rack. The runways for these structures are placed close enough together to pass a jeep, and are made sufficiently wide to take a dual wheel truck. The water channel clearance is made very ample to permit free passage of water at all times, even after quite hard rains.

Such a structure may be of three piling width under each cap. The piling may be 15 feet long, jetted 10 feet into the ground with the use of a Hardee piston type fire service pump. The caps are logs cut nearby in the woods and flattened top and bottom by hand hewing. These spans have two bents, and in some cases 6 x 12 inch timbers from old railroad structures are utilized. The fill is brought up to the mud sill to leave a flat approach. The water channel is cleared and the brush bulldozed away to obviate a concentration of current. The approach is widened to 35 feet where the first break itself is only 21 feet. A structure of these characteristics can take loads up to 25 tons.

The practice is to hand hew all bridge timbers near the site, and other material



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may be provided by a portable mill out in the woods. Exceptionally heavy rains in April 1947, washed out bridges that were put in by the CCC in 1934. The St. Joe forces have been replacing them.

In this district it has been demonstrated that too much reliance cannot be put in fires dying out against a fire break. When the brush is dry and high, a wind can cause the blaze to jump the gap. The sure control is to plow ring around the blaze and extinguish it. The 12-foot fire break has a substantial measure of effectiveness in the oak ridges, but there's a greater liking for the 35-foot strip. This makes possible the blading up of enough dirt to raise the fire break top above the water, making it easier to move equipment that keeps the breaks open. Grass, brush and trees close a break rapidly unless it is maintained. A too narrow access break makes it difficult to turn equipment or to pass. In the sandy oak ridges, washing presents a problem. On lower ground, a built up grade is shaped again after six months, and then stands up for a long time.

In working in the sandy stretches, grader wheels have been widened with welded flanges to a 22-inch width for better traction.

In the Hosford unit there are two pulp-

wood contractors operating, mostly in low land. One uses a winch crawler International TD-9 tractor. The other has a one-wheel John Deere. They pull to high land. They are used for cutting of cat faces, pondpipe and loblolly above 8 inches DBH. These are not highly regarded for lumber and pulp but grow faster than slash. The pine is subject to disease.

In these woodlands thinnings, it has been noted that 26-inch timber at the stump has been cut from land known to have been farmed in 1911 (measurement on combination scale). The logs are handled on a timber basis and loaded out at Greensboro and Hosford for a rail haul to the sawmill at Port St. Joe.

The improvement cutting has been completed on about one-half the Hosford district, with very little cutting or thinning in pure round stands (where trees have not been turpentineed).

The operation started with the CCC maps in 1938 but new, accurate maps are being made now from the aerial photographs.

Relations with Others in Area

The company follows a practical policy in its relationships with the residents of the areas, many of whom have cattle loose on the range. The first story put out when the company acquired the

lands was that there would be no more "light wood" for the residents. Light wood is deadened pine (tree) snag that residents use for firewood. The residents soon found they could still have "light wood" for their own needs.

A certain amount of controlled burning is necessary because in some areas not burned for 15 years the wire grass is 5 feet high. The company gets word to the cattlemen in advance of their plans to control burn, and in many instances ask the cattlemen about the location, sometimes ask help and to some extent control burn in locations to help the cattle men. Because of this working together policy, there exists excellent cooperation. The acreage burned runs to about 3000 acres annually; 100 acres here and there.

The company has learned from experience that in the low areas a type of almost impenetrable growth called "Ti-Ti Bay" despite its appearance cannot be used for a fire-break. Under certain conditions the leaves of this growth will go up in a flash fire that can throw a blaze 100 feet high; cause a ball of fire to jump a quarter-mile. Its smoke will be visible for 15 miles. This discovery was disappointing in that this all-year green growth is a menace instead of a barrier. Special effort is made to keep fire from reaching it.

A Report for the Year 1947 — by Southern Kraft Division of International Paper Company

COMPANY PULPWOOD SUPPLY

All figures are in cords

	RAIL	BARGE	TRUCK	TOTAL
Purchased on Open Market .	2,305,237	73,604	326,026	2,704,867
Produced by Company				
Operations	85,087	60,220	24,297	169,604
Totals	2,390,324	133,824	350,323	2,874,471

SUMMARY OF CUTTING OBSERVATIONS

	ACRES	PER CENT OF		PER CENT OF	
		TOTAL ACRES	CORDS	TOTAL CORDS	
Selective harvest .	219,447	41	1,031,400	36	
Seed tree harvest .	87,347	16	716,250	25	
Salvage	51,161	10	143,250	5	
Land clearing . . .	60,957	11	286,500	10	
Undesirable	118,552	22	687,600	24	
Totals	537,464	100	2,865,000	100	

Above are reproduced some of the most interesting statistical tables from a new illustrated booklet entitled "The Great Southern Crop" published by Southern Kraft Division of International Paper Co.

These tables reveal record-breaking purchases of pulpwood by Southern Kraft in 1947 for its eight mills from Arkansas to South Carolina, also the extent of the company's timber holdings in nine states and the way in which wood was harvested, i. e., cutting practices.

More than \$29,000,000 was spent in 1947 to acquire the record total of 2,874,471 cords, as shown in one of these tables. This total cordage was an increase of 146,651 cords over 1946 figures.

The booklet, like the company's "Report to the People of the South" which was issued last year, is designed to encourage sound woodlands practices among suppliers of Southern Kraft. There are

27 photos depicting proper thinning, ways to make a fire lane, mechanical planting aids, etc.

Successful Mechanical Equipment

In regard to mechanical equipment, the company's report gives what might be regarded as an "official okay" to the following interesting machinery:

"A high boom arch pulled by a Caterpillar-type tractor has been successfully used . . . during wet seasons or in low swamp areas."

"A thinning machine acting on the principle of a weed chopper cutting down trees in a five to six foot strip has been developed. Tests show a substantial saving is possible by thinning with the machine."

"A new planting machine which the company was instrumental in developing has proved able to plant 1,600 seedlings per hour."

OWNED OR LEASED ACREAGE

STATE	INT. PAPER CO.	SKTC*	TOTAL
Alabama	163,155	—	163,155
Arkansas	598,042	—	598,042
Florida	158,603	—	158,603
Georgia	—	192,991	192,991
Louisiana	284,242 ¹	97,555 ²	381,797
Mississippi	69,477	144,086 ³	213,563
North Carolina	152,952 ⁴	14,014	166,966
South Carolina	213,405	17,336	230,741
Texas	—	9,273	9,273
	1,639,876	475,255	2,115,131
144,651.82 acres long term leases		3140,914.00 acres long term leases	
297,553.58 acres long term leases		4967.00 acres long term leases	

¹Southern Kraft Timberland Corporation

"The company placed in operation 10 new diesel trucks used in conjunction with special trailers capable of hauling four to six cords per load."

The report shows that 83% of Southern Kraft's vast wood supply was moved by railroad in 1947. Railroad companies serving these mills added 2,424 pulpwood rack cars to their equipment and authorized conversion of 1,717 cars to pulpwood racks and the building of 200 new rack cars. The International Paper Co. itself purchased 90 rack cars because of a critical shortage in the Georgetown, S. C., area.

The report also announced appointment of nine "conservation engineers"—one for each of nine Southern states and outlines their duties. Their job is to encourage and assist farmers in growing pulpwood crops, to work with schools and clubs and public agencies, etc.

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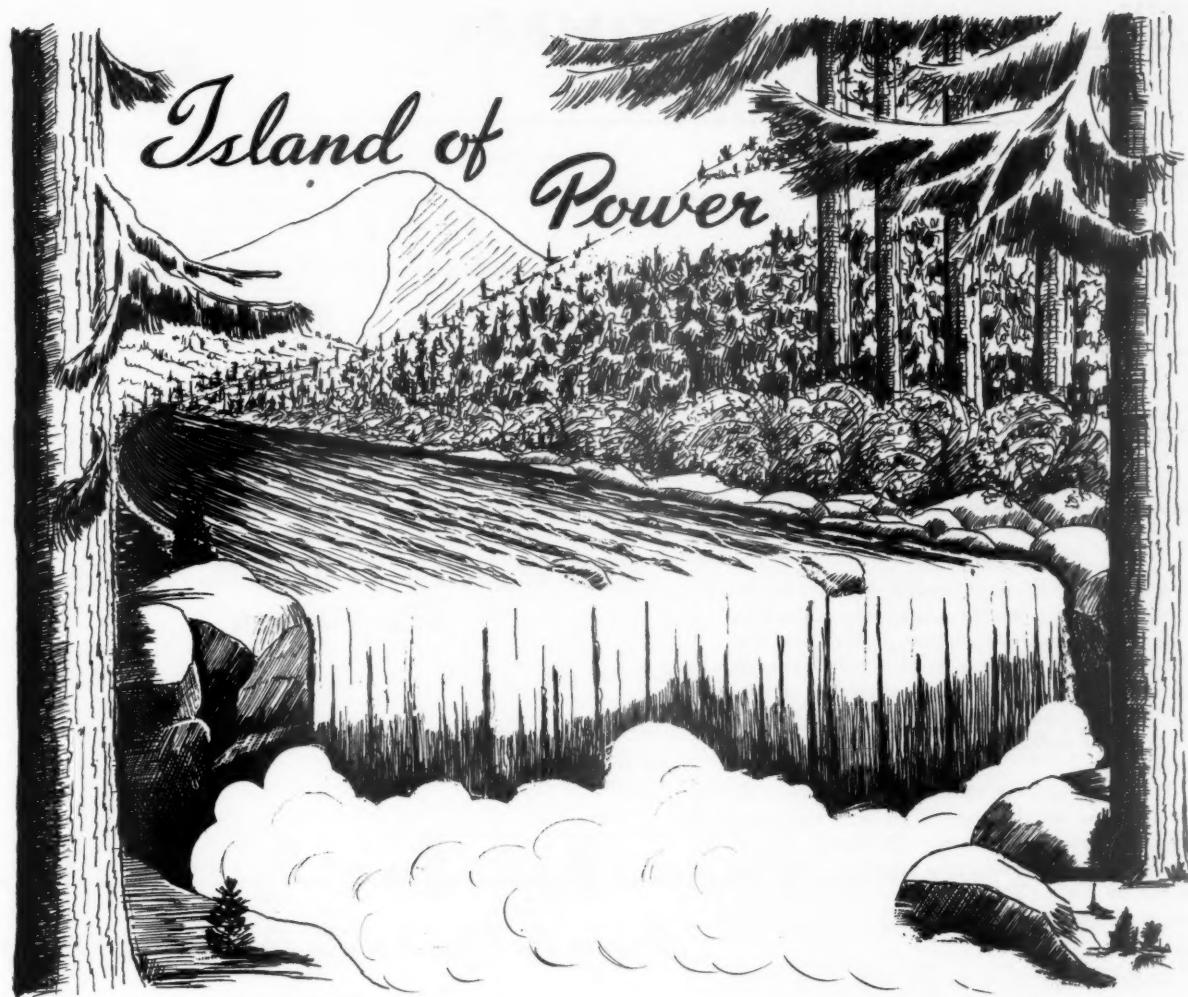
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THIS is the age of hydro-electric power, and Vancouver Island will soon have lots of it, ready to energize industry in a region amazingly rich in natural resources.

At Campbell River, famous for its fighting Tyee salmon, plants are being built to produce upwards of 150,000 horsepower.

First customer of this new project is the pulp mill at Port Alberni, owned and operated by Bloedel, Stewart & Welch Limited.



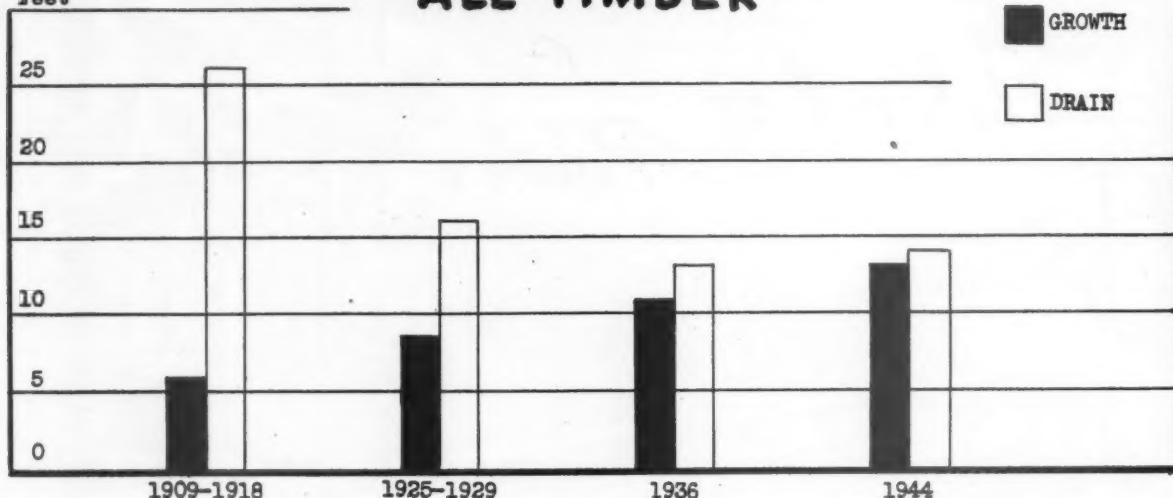
UNBLEACHED SULPHATE PULP MILL, PORT ALBERNI (Vancouver Island)

BLOEDEL STEWART & WELCH, LIMITED
VANCOUVER, CANADA

Comparison of Growth and Drain 1909-1944

Billion
Cubic
Feet

ALL TIMBER



In **PULP & PAPER'S** North American Review Numbers of both 1948 and 1947 considerable data was published on the status of the timber resources of the United States according to the most recent nation-wide appraisal by the U. S. Forest Service, which was carried out during 1944. It was a couple years later before this information was corelated and prepared for publication by the service.

Now the Forest Service has issued some charts which graphically illustrate its findings. They are published on this page and show drain and growth now in virtual balance. (In the case of pulpwood species, growth is now far ahead of drain. This was pointed out by the data published in our Review Number.)

The top chart shows annual growth and drain of all timber as estimated by the Forest Service. It is to be noted that total drain has gone down from 26,049 million cubic feet in 1909-18 to 13,661 million cubic feet in 1944. The relatively slight increase in drain from 1936 to 1944 is due largely to heavy war demands. At the same time, reported growth has increased from 5,995 million cubic feet in 1909-18 to 13,370 million cubic feet in 1944. This is due largely to three factors: 1. The replacement of static old growth forests by rapidly growing young forests. 2. Improved forest management. 3. Reduction of fire losses.

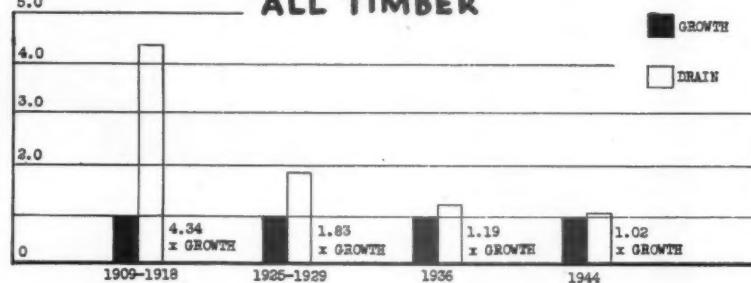
The second chart shows the ratio of drain to growth for all timber for the same periods as in the top chart. Growth equals 1.0. It shows that for the period 1909-18, drain was 4.34 times growth, while, in 1944, drain was 1.02 times growth.

The third chart shows losses by fire and other causes, such as insects disease, and windfall, in the four surveys from 1909 to 1944. It is to be noted that, for the period covered, losses by fire have been cut more than half.

The lower chart shows annual growth and drain for sawtimber. It is to be noted that while sawtimber has not followed a constant trend, yet growth has been constantly increasing. Estimated growth for the period 1909-18 was 9,672 million board feet, while, for 1944, it was 35,301 million board feet.

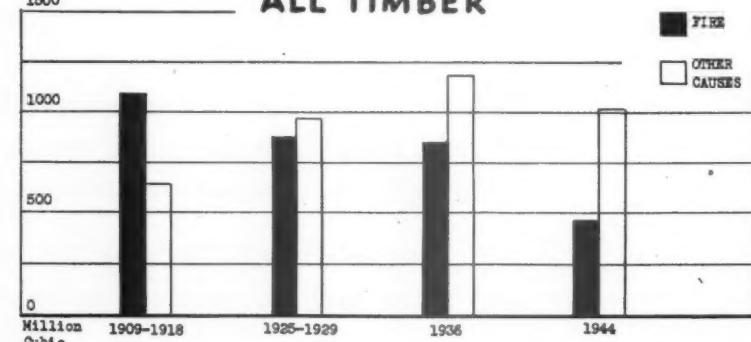
Ratio of Drain to Growth 1909-1944

ALL TIMBER



Drain by Fire, Insects, Disease, etc. 1909-1944

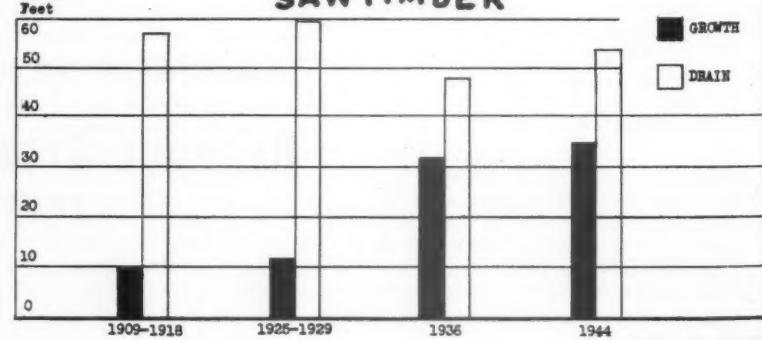
ALL TIMBER



Comparison of Growth and Drain 1909-1944

Billion
Board
Feet

SAWTIMBER



RAYONIER
INCORPORATED

WOOD

CELLULOSE ▶ is dependably uniform

Rayonier's wood cellulose is supplied in several grades to provide the special characteristics required for manufacture of the various types of products in which cellulose is used.

Quality control in production of these high-alpha grades of cellulose assures the constant purity and uniformity required in making viscose and acetate fibers, cellophane, and various cellulose derivatives.

In addition to development of new and improved grades of wood cellulose, one of the principal functions of our research staff is the study of the processing characteristics of our products under conditions similar to those found in our customers' plants.

Principal Grades of Rayonier Wood Cellulose



"RAYACETA" is a highly purified wood cellulose specially developed for the production of cellulose acetate fibers. It also is used in the manufacture of acetate films and sheets for packaging purposes.



"RAYOCORD" wood cellulose is a highly purified product especially suitable for the production of viscose yarns of high tensile strength. It is widely used in the manufacture of tire cords and for textile yarns where maximum strength is desired. It is also a good material for the production of saturating papers and vulcanized fiber.



"HICOLOR" is an established grade of purified wood cellulose for the production of viscose fibers and yarns of high quality. It is also used as a base material for vulcanized fiber and related products.



"RAYAMO" is a wood cellulose specially developed for the making of cellophane, used increasingly as a protective covering for fruits, vegetables, cigarettes, candy, and numerous other packaged articles.

EXECUTIVE OFFICES: 122 East 42nd Street, New York 17, N. Y.
MILLS: Hoquiam, Port Angeles, and Shelton, Washington; Fernandina, Florida.



In Industry News, left to right:

JOSEPH E. CONNELL, Nopco Chemical Co., Harrison, N. J., has been transferred to West Coast where he will be responsible for sales in Washington, Oregon and Northern California. He was formerly Sales Representative in New England.

PAUL EASTON, recently appointed Sales Manager of the specialty products department, of Bulkley, Dunton Pulp Co., with offices at 295 Madison Ave., New York City. Before joining Bulkley, Dunton he was Technical Service and Sales Representative for Hercules Powder Co.

PHILIP FENNELLY who will represent Pioneer Rubber Mills of San Francisco in the Washington, Oregon and Idaho area. He was previously Sales Manager for Huntington Rubber Mills of Portland, Ore.

GLENN L. JOHNSTON, who has joined Lukens Steel Co., Coatesville, Pa., in its Sales Development Dept. He will work with distributors and sales offices in Pittsburgh, Cleveland, Cincinnati, and Northeast Canada.

PALMER G. MACDONALD, Blake, Moffitt & Towne veteran of 25 years, has been appointed Manager of the Portland, Ore., division, succeeding Clinton L. Shorno who has retired. Succeeding Mr. Macdonald as sales manager is Frederic C. Inkster.

WHY NEWS IS NOW \$100 It Had Cost More Than It Sold For

Increased labor, rail freight and other costs resulted in a general increase in newsprint prices in the United States and Canada amounting to \$4 a ton, except in the case of Great Northern Paper Co., which announced a price boost of \$3 a ton.

The higher rate went into effect Aug. 1. First company in Canada to make the price announcement was Abitibi Power & Paper Co., Toronto, on July 24, and this was followed three days later by Powell River Co. on the west coast and other companies. The new price amounts to approximately \$100 a ton. Crown Zellerbach Corp. was first to make the announcement in the United States, followed soon afterwards by International Paper and others.

The higher price for newsprint had been pretty well anticipated in view of the well known increases in almost all

the cost factors involved in the manufacture of paper.

Executives of International Paper Sales Co., Crown-Zellerbach, Powell River Co. and other important newsprint producers stated that the average cost per ton of the manufacture and transportation of newsprint had exceeded the selling price during the first half of this year.

Several uncertain factors affect costs of production in Canada. One is the application being made by Canadian railroads for an increase in rates amounting to 20%. Another is the demand of woods workers in eastern Canada as well as in British Columbia for higher wages.

In eastern Canada men in woods operations have been asking for a 25% increase. In British Columbia, where pulpwood is harvested along with saw logs by the same crews, the unions seek an increase of 25 cents an hour and a 40 hour week.



RECENT AND CURRENT VISITORS in North America—an Australian and four Finns (left to right):

ARTHUR C. FISHER, Pulp Mill Supt., Australian Paper Mfgs. Ltd., studying kraft processes on this continent as his company plans to boost production of its Maryvale mill from 150 to 300 tons, adding two British-made machines.

PAAVO KIVI, Mill Mgr., Kajaani sulfite mill, and—

OLAVI LAUROLA, Tech. Adviser of Finnish Cellulose Assn., who reported several Finnish mills are being rebuilt.

HEIKKI SIHTOLA, Mill Mgr., Veitsiluoto Osakeyhtiö, of Kemi, and—

MATTI JALKANEN, Mill Mgr., Rauma-Raaha Oy., in Rauma, who paired together as traveling companions. Mr. Sihtola had a scholarship year in '37 working at Soundview Pulp Co. on the Pacific Coast.

William R. Zonner New Manager At Deferiet

Lyman A. Beeman, vice president of St. Regis Paper Co., announces appointment of William A. Zonner as manager of the company's mill at Deferiet, N. Y.

Mr. Zonner, a native of Ohio, was sales engineer with Appleton Machine Co. and prior to that was associated with the Consolidated Water Power and Paper Co. and the Mead Corp. His experience with these firms in manufacture of machine coated and supercalendered paper should prove most useful in connection with the Deferiet mill's similar expansion.

Mr. and Mrs. Norman Scott Make Cross-County Tour

Norman Scott, sales manager of Orr Felt & Blanket Co., who has been touring paper mills far and wide for, lo, these many summers and winters, has just completed the longest single motor trip of this kind he ever made with his wife, Margie, taking her turn at the wheel.

Mr. and Mrs. Scott have been over eight weeks on the road, from Piqua, Ohio, and return via Kalamazoo, the Fox River Valley of Wisconsin, Denver, Albuquerque, Los Angeles, then all the way up the Pacific Coast to Canada and back home by a northern route through Spokane, visiting many mills enroute.

Lignin Seminars In Portland and Seattle

The Pacific Section of TAPPI's third Annual Seminar, this one conducted by Dr. H. Erdtman, distinguished investigator of the chemistry of lignin and wood resins, from the Royal Institute of Technology, Stockholm, Sweden, was to be held about the time this issue appears.

Dr. Erdtman's lecture was prepared on "The Chemistry of Lignin and Some Non-Carbohydrate Extractives of Wood." He was to be accompanied by his wife and collaborator, Dr. G. Aulia-Erdtman, also a chemist engaged in research in wood chemistry.

Two identical series of four lectures were offered as follows:

Aug. 30 and 31, 9 a.m. to 12 noon, 2 to 5 p.m., Chemical Laboratories (Bagley Hall), Univ. of Wash., Seattle, Wash.

Sept. 2 and 3, 9 a.m. to 12 noon, 2 to 5 p.m., Multnomah Hotel, Portland, Ore.

Addition to Tasmania Mill

Paper Makers Pty., Ltd., a subsidiary of Associated Pulp and Paper Mills, Ltd., Burnie, Tasmania, will install plant for the production of 10,000 tons of hardwood a year. Some major plant units are already awaiting shipment.

Plant Superintendent J. J. Graham recently returned from an investigation of process in Sweden.

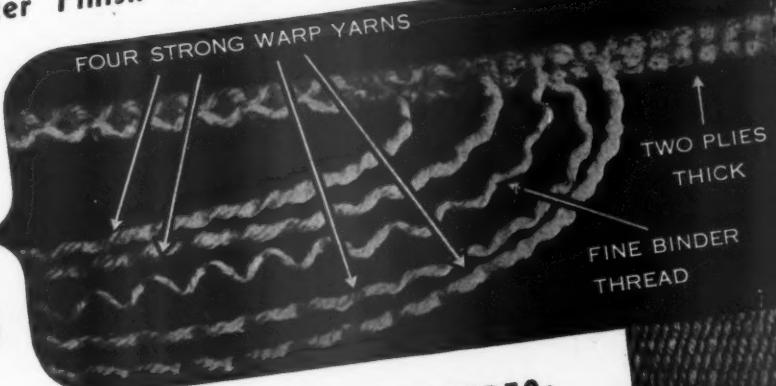
Australians Buying Equipment

S. L. Kessell, managing director of Australian Newsprint Mills, Ltd., Boyer, Tasmania, is on a Canada-U. S.-England tour to make arrangements for ordering equipment for the company's 10 million dollar expansion. Mr. Kessell is accompanied by W. R. Henry, general manager of the company.

BRANDON "Multiple Weave" Cotton Dryer Felt

A Smoother Surface:
for Better Finish on high-grade papers

Here is
the
weave



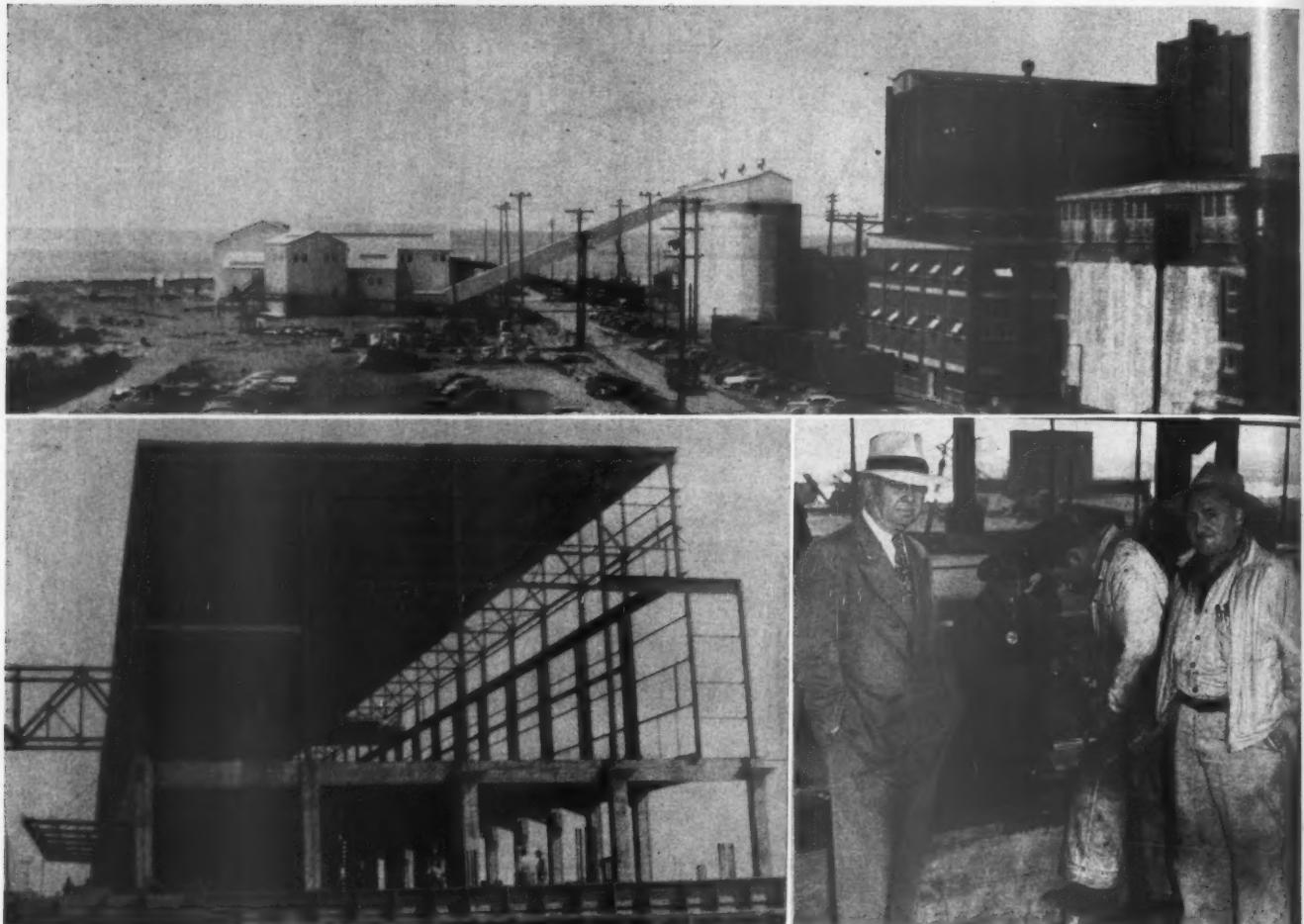
NOTE Closely these IMPORTANT FEATURES:

- 1 Surface threads go "over and under" only one filler—giving SMOOTH, FLAT surface. No sharp "knuckles" to mark your sheet. Better finish.
- 2 Same four (4) sets of strong WARP threads used in the 3-ply weave. Plenty rugged for fast running machines.
- 3 High porosity for fast drying. Medium weight—52-oz. square yard.
- 4 Actually two separate fabrics woven together—if one surface wears through, the other complete fabric holds the felt intact.

* Prestretched and equipped with Clipper Seam if desired.
Available now from 80" to 170" wide.
Same price as regular cotton felts.

Morey Paper Mill Supply Co.
309 SOUTH STREET, FITCHBURG, MASSACHUSETTS
Sole Distributors of Dryer Felts Manufactured by
BRANDON CORPORATION · Greenville, S. C.

NEW ST. REGIS CONSTRUCTION



VIEWS AT ST. REGIS PAPER CO. on the Tacoma, Wash., waterfront, showing new construction, which will provide employment for 500 to 600 additional people.

At top (left to right) are: The new hydraulic log barking plant; conveyor to the top of the new big chip storage silos; the silos and the pulp mill and bleach plant. The pulp mill and bleach plant have been here for many years, but other new additions will include a paper mill and bag plant.

Lower left: Here is the new paper mill taking shape. This picture was taken from one end of the 600-ft. long building. The 180-inch wide Pusey & Jones Fourdrinier will be on the second floor. An 180-ft. long electric room with filtered air system designed by Drew Engineering, Portland, Ore. (who also will provide machine

room ventilation) will be a feature of this lower floor. A 14-ft. Hydrauliper battery of 10 E. D. Jones & Sons Majestic jordans will be on upper floor.

Lower right: JUSTIN H. McCARTHY, Plant Engineer, who is in charge of the new construction, stands at left in this picture and at right is GEORGE BRODLEY, veteran Erector for Pusey & Jones, whose last assignment before moving to Tacoma was in erecting the new Union Bag machine at Savannah, Ga. They are watching pre-drilling of holes in the bed plates with a special Pusey & Jones jig. This is done even before the machine sections are delivered and must be especially accurate. This will speed up machine installation.

LONGVIEW CONSTRUCTION HALTED

Construction on the new 100-ton newsprint plant of Pacific Paperboard Co., Longview, Wash., has stopped.

A third of the building is up, piles driven, and part of the machinery is on port dock at Longview.

It is reliably rumored that after expenditures to date on this plant of over half-million dollars, Southern California Associated Newspapers has abandoned the project. This organization, which is financing building of the newsprint mill, is owned by Copley Press. Ownership is currently tied up in estate as result of death of head of the company, and it is understood that the beneficiaries are objecting to the cost of construction.

Pacific Paperboard Co. is proceeding on schedule with its expansion and improvement program to increase production to 200 tons of paperboard per day. A loan from the R.F.C. has just been arranged

for the purpose. No. 4 machine is at present making newsprint to supply news to publishers which would otherwise find difficulty in obtaining the necessary paper.

B. C. Bridge & Dredging Co. To Build New Mill

Contract for the building of the H. R. MacMillan Export Co.'s new \$12,000,000 bleached kraft pulp mill near Nanaimo, B. C., has been awarded to the B. C. Bridge & Dredging Co. of Vancouver, B. C.

B. C. Bridge & Dredging Co., headed by W. G. Mackenzie, built the Port Alberni, B. C., kraft mill of Bloedel, Stewart & Welch, Ltd., and recently completed preparation of the site at Port Edward for Columbia Cellulose Co.'s (Celanese Corp.

of America) sulfite pulp mill in northern British Columbia.

The name of the pulp mill subsidiary of H. R. MacMillan Export Co. is Nanaimo Sulfate Pulp Co. President is H. R. MacMillan. Vice-presidents are W. J. Van Dusen and E. B. Ballantine, the latter being in direct charge of the project, assisted by Clifford Crispin and Jack Prescott.

Howard Simons, who designed the Bloedel mill, is designing the Nanaimo mill, and his construction engineer is Val Gwyther, who also participated in the Port Alberni job.

MICHELL THOM, former Canadian mill superintendent, and now superintendent of United Shoe & Leather Co. board mill in Mexico City, reports a price "war" in the paper box industry below the border. He and his family have moved to a new apartment at Alpes 445—Dept. 10, Lomas de Chapultepec, Mexico, D. F., Mex.

SOUNDVIEW



A circular inset image within the 'O' of 'SOUNDVIEW' shows an aerial view of a large industrial facility, likely a pulp mill, with numerous buildings and structures.

High Grade

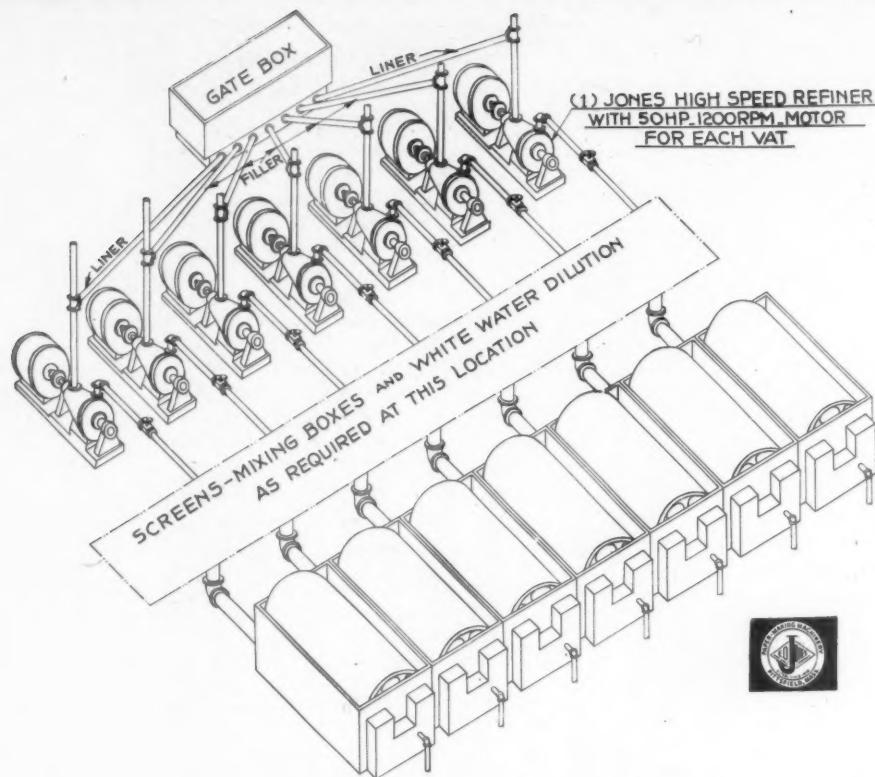
**BLEACHED
SULPHITE PULP**

SOUNDVIEW PULP COMPANY
EVERETT WASHINGTON

SEPTEMBER, 1948

89

UNUSUAL USE OF JONES REFINERS



As part of an overall modernization program which included increasing production from 60 tons per day to 100 tons per day of various board grades the Carthage Paper Makers, Inc., Carthage, N. Y., have made an unusual refining installation. The system was conceived by James R. Church, superintendent of the mill, and under his supervision it was installed and has successfully operated for several months.

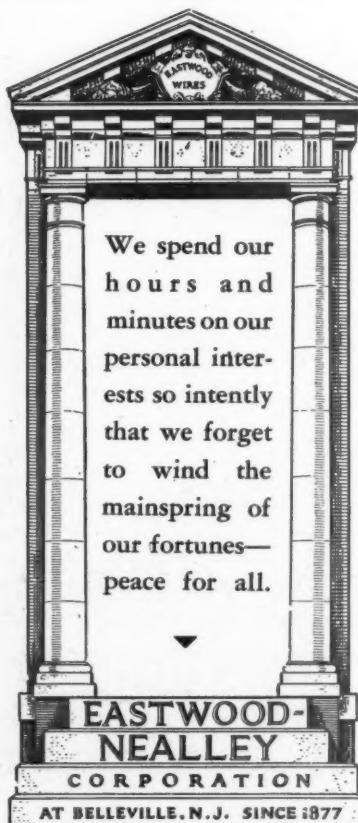
While planned piping is yet to be installed, the accompanying sketch shows the underlying principle of the system. One E. D. Jones & Sons Co. No. 1 High Speed Refiner is connected for each of the machine's seven cylinders. The pulp is prepared in pulpers, sent through an efficient cleaning system into a gate box. From the gate box the desired quantity is sent through the refiners into screen headboxes where dilution takes place and then flows directly into the vats.

By having a separate jordan or refiner for each cylinder the maximum in control is attained. It is possible to change the degree of stock treatment for any vat and thereby take care of such troubles as blisters, etc. Proper refiner adjustment is easily obtained and once set has been found to require no further attention until new machine conditions or furnish changes are encountered.

The Jones refiners are equipped with stainless steel tackle and 50 hp. 12 r.p.m. motors. Actual motor load has never exceeded 40 hp. for up to 100 tons per day of product. Such grades as plain chip or 20 point bleached manila (news bottom liner, 5 cylinders of mixed paper filler and bleached top liner) boards are consistently

made for 70 hp. hours, or under, per ton of product refining power.

These small efficient refiners give flexibility and good stock treatment with the minimum of space requirements.



Wisconsin Rag Mills Grant Another Pay Raise

Seven-cents-an-hour raises for AFL Paper Makers union employes in four Wisconsin "rag-bond" mills was agreed upon Aug. 4.

Base rate was brought to \$1.05 cents for men and 98 cents for women at Fox River Paper Corp., Appleton; Gilbert Paper Co., Menasha; Neenah Paper Co., Neenah, and Whiting-Plover Paper Co., Stevens Point.

The same companies had given 5-cent increases only last Dec. 1. About 1,200 union members are involved in the contract which includes a 48-hour week and time and a half for Saturdays.

A. J. Schierl was spokesman for the four mills represented by William Roberts, Fox River; George Gilbert, of Gilbert Paper; Leo Schubart, of Neenah Paper; and Mr. Schierl, of Whiting-Plover.

Gordon Petrie Joins Black-Clawson Staff

Gordon Petrie, 27-year-old former member of the engineering staffs at Puget Sound Pulp & Timber Co. and Longview Fibre Co., has joined the sales department of Black-Clawson Co., pulp and paper machine builders, of Hamilton, O.

Mr. Petrie, who was a captain in U. S. Army security agencies in the Pacific theater during the recent war, is the eldest son of Robert T. Petrie of Portland, Ore., who represents Black-Clawson, Shartle Bros. and Dilts Machine Co. on the Pacific Coast. Gordon Petrie and his wife, a former Longview, Wash., girl, have moved to Hamilton.

Another son of Bob Petrie, Bruce, 25, is assistant engineer of the Olympia Breweries of Olympia, Wash., serving under Dewey Riggs, chief engineer of that company and former plant engineer at Longview Fibre Co. The Olympic brewery is in a new location now but its old plant was temporarily turned into a paper mill during prohibition days. The machine was later moved to Columbia River Paper Mills.

Longview Fire

The worst fire in history of Longview, Wash., destroyed the 140 by 1800 ft. cargo dock of Weyerhaeuser Timber Co., on Aug. 3. Loss was estimated at \$750,000 to \$1,000,000, including lumber in excess of 3 million feet, stacked on the dock.

Normal operations of pulp and lumber departments were resumed the morning following the fire. Water-borne shipments continued without interruption, with the Port Dock handling them.

FRED GILMORE, assistant superintendent at Puget Sound Pulp & Timber Co., gathered in the fish at his summer home on Whidby Island on his vacation. Don Reed, alcohol plant superintendent, enjoyed the beauties of Vancouver Island with his family. Vic Haner, plant engineer, sailed his cruiser, "Gertie," taking his family among the San Juans and the islands of the Straits of Georgia. Sid Collier, assistant superintendent, toured the Cariboo country before settling down at his summer home, "Sea-scape," at Neptune Beach north of Bellingham.

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New Paper Use Developed for Rayon Mills

A tube of tough paper, which reduces the cost of handling rayon yarn, has been developed for American Viscose Corp. It is a non-returnable cover for rayon "cakes," the soft doughnut-like package weighing about a pound in which rayon yarn is collected after spinning, and takes the place of a knitted, stockinette cover on which the weavers have had to make a five-cent deposit. Being disposable, the paper cover eliminates bookkeeping, handling, extra shipping, and weavers say, it is more efficient.

The paper has to remain strong when wet because the yarn is soaking wet when the cover is put on. It has to be able to stand another thorough wetting as the yarn is prepared for weaving and dyed with the cover still intact. The paper has to be very porous, so the water can get out as the yarn is dried. It has to permit sizing and dye to pass through easily when wetted again. It has to have a smooth seam that will not cut or abrade the yarn. The cover that finally worked was the simple tube with a lapped seam, and of a paper developed for strength and porosity.

Vancouver Iron Works Completes Installations

Pacific Mills, Ltd., recently completed installation of the last of its four new 3½-ton digestors built by Vancouver Iron Works, Vancouver, B. C.

When Pacific Mills' Ocean Falls kraft mill went into production in Nov., 1917, it was equipped with four two-ton rotary digestors of German manufacture. In 1926 it was necessary to replace these vessels because of corrosion. The replacements were also of German make and these in turn gave way in 1936 to 2½-ton units manufactured in the United States by the Kellogg Co.

Arboretum for City Sponsored by Mills

Thirty-five acres of park land in the city of Vancouver, B. C., will be developed as an arboretum—a museum of native trees and shrubs—as a community project sponsored by the pulp and paper industry in British Columbia, which will spend \$40,000 on this project over eight to ten years, to provide correct information about native trees.

Calco Chemical Plant Completed in West Virginia

Calco Chemical Division of the American Cyanamid Co. announces its new plant at Willow Island, West Virginia, has been completed and is now in full operation.

A new third unit producing melamine concludes the construction work on the huge chemical plant located on an 1100 acre site. The first unit went into operation Nov. 25, 1947, for the production of pharmaceuticals. A second unit was completed in Feb., 1948, for manufacture of Iron Blue, a pigment widely used in inks and surface coatings.

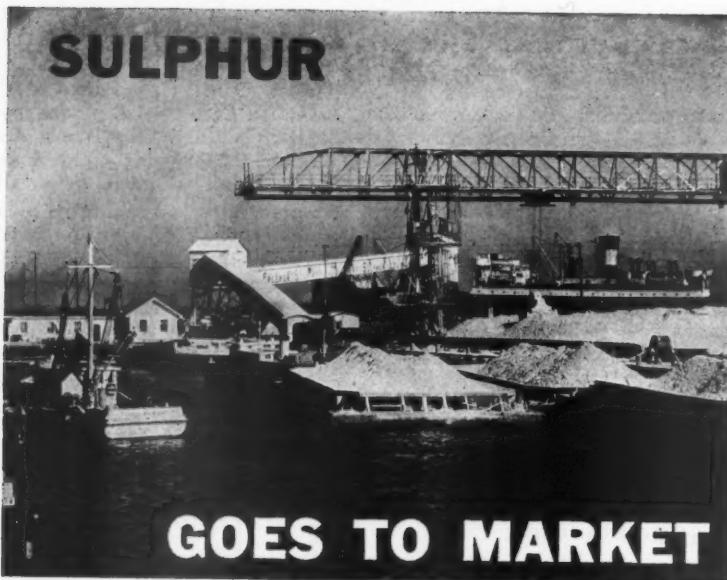
Brammers Are Installed In Brown Co. Mills

After using a Brammer Consistency Controller in their Riverside mill for over a year, Brown Company, Berlin, N. H., have installed four more Brammer controllers purchased from Paper and Industrial Appliances, Inc., New York, in their sulfite mill, tube mill and on their new towelling machine, "Mister Nibroc." They have used a Brammer for a year at the Riverside mill.

AMYLO

An enzyme product
for preparing superior coatings
and tub-sizing from starch.

THE CALCO COMPANY, INC., 180 Madison Ave., New York 16, N.Y.



From this Mississippi River shipping terminal of Freeport Sulphur Company at Port Sulphur, Louisiana, Sulphur is shipped to Industry.

One of a series of Stories on Sulphur

BY RAIL and by water Sulphur shipments leave Gulf Coast ports bound for market. Where is the market for Sulphur? Everywhere we look around us. A hundred times a day we touch and use food, materials and articles in which Sulphur has played a part. Sulphur's markets are the countless industries which need its help.

THESE industries make use of the chemical properties of Sulphur to supply us with such products as rubber, paper, fertilizer, chemicals, rayon, petroleum products, steel, dyes, paints, explosives and textiles. And these are only a few of the products in which Sulphur is a key factor.

SOMETIMES Sulphur is used just as it comes from the mines. Often it is converted into Sulphur Dioxide or Sulphuric Acid before it goes to work. Usually its service is performed behind the scenes at some stage in the process and Sulphur does not appear in the final products — the products we buy in the stores.

FREEPORT SULPHUR COMPANY

OFFICES: 122 East 42nd Street, New York 17, N. Y.

MINES: Port Sulphur, Louisiana • Freeport, Texas

NEW EQUIPMENT AVAILABLE FOR IMMEDIATE DELIVERY

- 1 Each General Electric (Engine Type) 250 HP, 360 RPM type TS Synchronous Motor, 440 volts, 3-phase, 60-cycle, 50 degree C Rise, .80 power factor. Stator arranged for forced air ventilation, less Shaft and Bearings.
- 1 Each General Electric No. CR7811, high interrupting capacity, non-reversing, dynamic breaking, dead front Controller, complete with air break type Contactor.
- 1 Each General Electric Excitor Motor Generator Set—7½ K.W., 125 volts, complete with Excitor and Motor on a common base.

Write, wire or phone:

SUMNER IRON WORKS
EVERETT WASHINGTON

FOR SALE

McIntosh & Seymour Tandem Compound Engine No. 1540. 16" diameter high pressure — 33" diameter low pressure, 38" stroke, 130 R.P.M., rated 500 h.p. Has with it Twin Beam Vertical Marine Jet Condenser Pump 10x15x22.

Crane & Co., Dalton, Mass.

AMERICAN MACHINERY & ELECTRIC CO.

NEW & REBUILT MOTORS & GENERATORS AVAILABLE IMMEDIATELY

- 1 AC used 2190HP 300RPM 3/60/2300 Sync.
- 1 AC used 1500HP 164RPM 3/60/2300 Sync.
- 1 GE New 1000HP 900RPM 3/60/2300 Sync.
- 1 EM New 500HP 120RPM 3/60/2000/4000 Sync.
- 1 GE New 1000HP 900RPM 3/60/2300 Sync.
- 1 GE used 1250HP 100RPM 3/60/2300 Sync.
- 1 W 250HP 540/3000RPM 230 V DC Motor
- 1 GE used 750HP 720 RPM 3/60/2300 Sync.

COMPLETE LINE FAIRBANKS MORSE PUMPS

2403 SO. TACOMA WAY TACOMA, WN.

FOR SALE

P & J Fourdrinier section. Wire 133" x 61' 2". Couch rolls. Brest roll. Wire rolls and Table rolls. Cone drive and shake. Box No. 13, Pulp & Paper.

WALTER B. MOREHOUSE, paper chemicals division manager of Nopco Chemical Co., Harrison, N. J., started a six weeks tour of Pacific Coast mills in August, accompanied by **JOSEPH E. CONNELL**. Prime purpose of the trip is the introduction of Mr. Connell of Nopco to the industry.

A **NEW BOOK** "Recovery Equipment for Pulp Mills" has been published by Swenson Evaporator Co., Division of Whiting Corp., Harvey, Ill., sent free on request. This bulletin features application of various Swenson products to the recovery problems of pulp mills, such as: pulp washers, evaporators, mud filters, spray dryers, etc.

THE GALLIE - KING - BAG CO., plant at Houston, Texas, has been purchased by Bemis Bros. Bag Co., which will use the property as an addition to its present facilities in Houston. F. V. Deaderick, manager at Houston, will supervise at Houston, also.

PULP & PAPER

Pre-Packaging Plant Develops New Types

Glenn L. Martin, aircraft manufacturer, is operating a pre-packaging plant on his Glenmar Farms in Maryland as a proving ground for new theories of packaging, refrigeration, shipping, and merchandising.

His package is a Britewood type of in-folded, stay-up, paperboard tray, most of them being overwrapped with cellophane. A wet-strength-treated board is used in the tray which acts somewhat like a blotter, absorbing moisture and holding it as a reservoir against the eventualities of any dehydration of the produce. To avoid moisture condensation inside the package, the temperature of the produce is kept very low at the plant and gradually increased through the successive distribution steps; a temperature of about 45° F. is reached by the time the packages are put into refrigerated display cases or into reserve cold-storage space.

A small (3 by 2½ inches) folder is inserted in each package to inform the consumer of the advantages of prepackaged produce. Corrugated cartons are used in shipping containers.

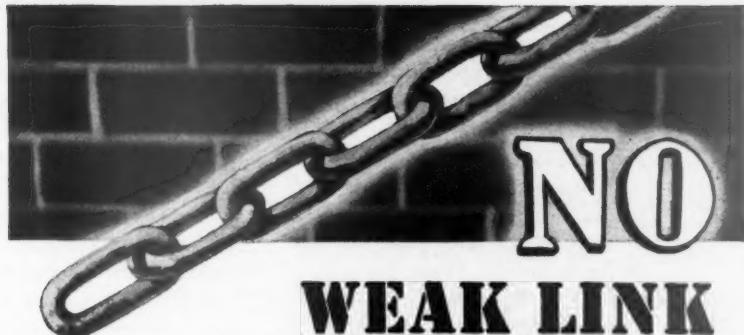
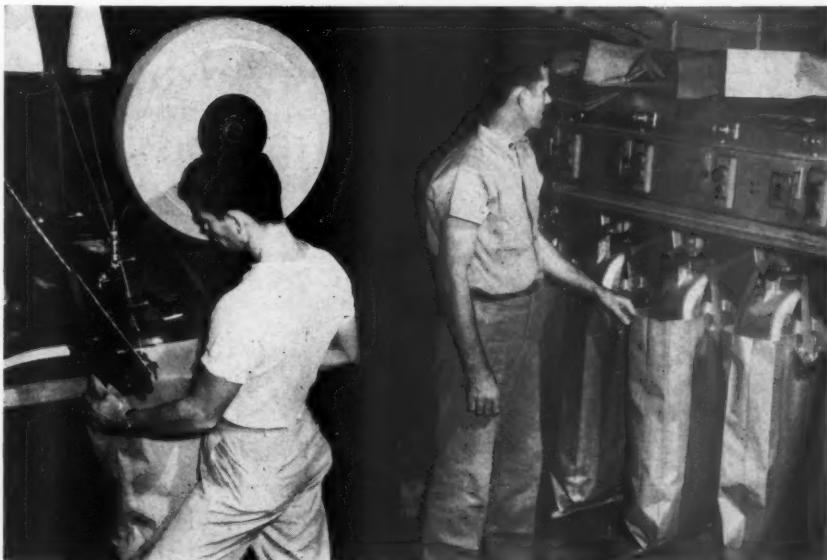
New Citrus Fruit Bag Developed by St. Regis

A chemically treated multiwall "Citrobag," capacity 45 pounds, has been developed by the St. Regis Paper Co.'s packaging division. Advance figures are said to indicate a saving of approximately \$175 per car of fruit in comparison with mesh bags and other methods of prepackaging oranges for market.

And according to Kenneth D. Lozier, vice president of St. Regis Sales Corp., there are important savings in shrinkages of fruit as well: 2.54% with the citrobag against 7.49% where oranges were packed in containers where air had access to the fruit. The new bag eliminates refrigeration in both plant and transit. Output and production are speeded and streamlined.

Recently an editor of PULP & PAPER flew from Jacksonville to Lake Wales to witness the formal start-up of the first operation at Waverly Growers, prominent shippers of oranges and grapefruit, attended by several

AT LAKE WALES, FLORIDA—Automatic packer (right) for St. Regis multiwall "Citrobag." At left is the stitcher.



A chain is only as strong as its weakest link
A tile tank is only as strong as its weakest tile

THAT'S WHY—

- Every Stebbins Semtile Tank is designed for its particular job.
- Every Stebbins Tank utilizes the fullest structural benefits of the tile, steel and concrete which go into it.
- Stebbins field personnel are steeped in the Stebbins tradition of careful workmanship and meticulous attention to the smallest detail of construction.

THE RESULT—

Stebbins has never had a Semtile Tank failure.



score executives from the Southeast citrus industry. But for the past two years shipments in Citrobags have been made from Waverly to chain stores in the Carolinas, Pennsylvania, New Jersey and New York state, both in straight carloads and motor freight.

A mechanical packer has been designed by the machinery division of St. Regis to handle both oranges and grapefruit. The inner wall is chemically treated kraft which prevents deterioration and reduces shrinkage in fruit. Next is a ply treated to hold the chemical vapor within the closed space. The two outside plies are of wet-strength paper treated with a compound for resisting the effects of citrus juices.

MULTIWALL MACHINE OPERATOR
Must be thoroughly experienced. Familiar with Coty Tuber and Bottomer. Good opportunity for the right man. Modern plant located in the South. Write all details stating age, experience and salary. Reply Box No. 14, Pulp & Paper.

BAG MACHINE ADJUSTER

Excellent opportunity for top notch man, experienced with specialty paper bag machines, Aniline Printers; plant located in Southwest. State all details in first letter. Age, experience, salary required. Reply Box No. 15, Pulp & Paper.

New Machine Packages Rock Wool Insulation

A new packaging machine designed by engineers of Union Bag & Paper Corp. has for the first time placed rock wool insulating material in the category of automatically packaged products, Union Bag & Paper announces.

Because of its accurate weighing of this light, fluffy product, this machine is saving the rock wool industry hundreds of thousands of dollars a year formerly lost in overweight, and by controlled compression is saving up to 14% in the cost of the bags. It reduces packaging from a four or five, to a two-man operation.

The multiwall kraft bags are rectilinear in shape and are readily palletized.

The material is fed onto two alternate conveyors mounted on individual weighing mechanisms. Mounted on the weighing mechanisms, are hoppers with air-operated duck bills which expand inside the bag. They open to hold the bag in position to receive the falling column of rock wool, and also to provide an airtight closure against the dangerous dust.

Automotive Type Foot-Pedal For Clark Electric Fork Trucks

Foot control of speeds is now standard on all Clark electric battery-powered Carloader model fork trucks, according to announcement by J. H. W. Conklin, sales manager of the Industrial Truck Division of the Clark Equipment Co., Battle Creek, Mich. Detailed information concerning Clark "electrics" may be obtained by writing.

Time, Inc., Reports Record Six Months

Time Inc., major customer of several big North American paper mills, had its largest sales volume in 24 years in the first six months of 1948, said Roy E. Larsen, president.

Income totaled \$64,705,000 or \$6,275,000 above income in the first half of 1947. Increased costs, however, slightly more than offset this increase income. Net income, after taxes, was \$4,204,300, a gain of \$140,400. Net profits were \$4.37 a share. Costs and expenses in the first half of 1948 were \$58,290,700 against \$51,977,200 in the like period of 1947.

Foxboro Co. Enlarges

Having acquired the remaining space in the building it occupies, at 266 Fremont St., the San Francisco branch of The Foxboro Company is now settled in its rearranged quarters, with practically double the working space previously available. The Foxboro Company, with its main office and factory at Foxboro, Mass., is one of the leading makers of industrial instruments. Harry B. Brooks is manager of the Pacific District.

ST. REGIS PAPER CO. net sales amounted to \$83,907,818 for the period from Jan. 1 to July 3, 1948. This compared with \$69,033,514 reported for the first six months of 1947. Net income, after provision for federal taxes, amounted to \$8,744,935, against \$7,696,147. Directors declared a regular quarterly dividend of 15 cents per share on the common stock, plus an extra dividend of 10 cents per share. Roy K. Ferguson, president, said the progress reflects operations of the company's new "Kraft Center" at Pensacola, Fla. The new paper mill and multiwall bag plant there came into production the middle of April.

One of Largest Jordans

One of the largest Jordans ever built, a Jones Leviathan, has just been put in operation at the Oswego, N. Y., plant of Taggart Corp. It is equipped with stainless steel patented Nowave plug and shell filling and the plug was dynamically balanced at its operating rpm motor, and treating up to 175 tons of kraft bag stock per day.

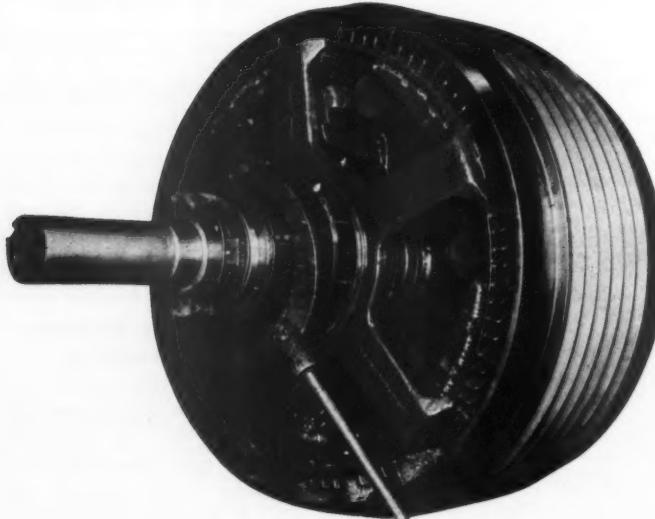
Stadler, Hurter & Co.'s New Office

Stadler, Hurter & Co., pulp and paper mill designers and engineers with head office in Montreal, has established a branch office at 76 Beaver Street, New York, to serve the industry in the United States under the name of Stadler, Hurter & Co. (New York) Inc.

New Headquarters in Portland

The Oregon Life Insurance Co. building at the southeast corner of S. W. 11th Ave. and Alder Street, Portland, Ore., is the new headquarter's home of the Columbia River Paper Mills, headed by F. W. Leadbetter. The three-story 50 x 100-foot building is constructed of reinforced concrete and brick, with marble facing and bronze trim.

The Pulley with the Pull that Pays---



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